Chapter 33

Avestan and Old Persian Morphology

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0. General introduction

Three Old Iranian languages are known from texts: Old and Young Avestan and Old Persian. Avestan is the language of the *Avesta*, the sacred book of the Zoroastrians. The *Avesta* is a collection of mostly ritual texts that was composed orally at two different periods in the 2nd and 1st millennia B.C.E. As the spoken language changed, the *Avesta* was "crystallized" as sacred texts, which were then orally transmitted for over a thousand years before they were committed to writing some time in the Sasanian period (ca. 240–651 C.E.).[1]

Old Persian is known from royal inscriptions from the Achaemenid period (549–330), the earliest of which is the Behistun (Bisitun) inscription by Darius I from ca. 520 B.C.E. Old Persian was probably spoken by the Iranian tribes who migrated into western Iran around the beginning of the 1st millennium B.C.E. and finally settled in Fars (OP *Pārsa*) in southern Iran, replacing the Median (Iranian) and Elamite (non-Iranian) rulers in the area; it is the ancestor of Middle Persian and modern Persian (Farsi). The inscriptions are written in a cuneiform script that was probably invented under Darius for the purpose of recording his deeds. In the latest inscriptions the language has already changed to a post-Old Persian or pre-Middle Persian form, as we can see from the use of "wrong" endings (from an Old Persian point of view) and various other non-Old Persian forms.[2] Old Persian must therefore have been spoken for a few centuries before the first inscriptions and probably throughout most of the first half of the first millennium B.C.E.

Beside Old Persian and Avestan other Iranian languages must have been spoken in the 1st millennium before our era. Median, which was spoken in western Iran and presumably was the "official" language during the Median period (ca. 700–522), known from numerous loanwords in Old Persian, had important phonological isoglosses in common with Avestan, rather than Old Persian. The Median words are not, however, restricted to technical terminology such as administration, but are from all parts of the lexicon (Schmitt 2003). Sometimes both Median and Old Persian forms are found. It is also possible that Old Persian had assimilated elements from Avestan. A small, but important, part of the Old Persian vocabulary is

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Supplemental abbreviations unique to this essay are found on p. 906.

1. See Kellens 1998, Vaan 2003: 8–9, and Skjærvø 2003–4 for recent evaluations of the transmission.

2. See Schmitt 1999 for a complete inventory.

known only from Elamite texts, including grammatical forms otherwise unknown in Old Persian (Hinz 1975).

0.1. Old and Young Avestan

Avestan falls into two chronologically distinct layers: Old Avestan and Young(er) Avestan. The *Old Avesta* comprises the five *Gāθās* 'songs' and the *Yasna Haptaŋhāiti* 'the sacrifice in seven sections'. The remaining Avestan texts are all Young Avestan. Among these latter we distinguish between Young Avestan texts composed with consistent and mostly correct grammar and texts compiled at a stage when Young Avestan was no longer a living language and the authors and compilers only had an incomplete knowledge of it.[3] The *Young Avesta* contains several geographical names from the area of modern Afghanistan and the Central Asian Republics, and Young Avestan probably was a local language in that area.

Several phonological and morphological isoglosses separate Old Avestan and Young Avestan, which means that they are not simply different stages of the same language. It is not probable, however, that they were contemporaneous languages, as argued recently by I. Gershevitch (1995); the morphologies of the two languages, which compare to those of Old Indic and Old Persian, respectively, rule out such a possibility (Skjærvø 2003–4).

Compared with Old Avestan, Young Avestan represents a changed (or different) form of the language, especially in phonology, but also in morphology and syntax:

• The verbal system of Old Avestan is still based upon the opposition present : aorist : perfect known from Vedic and Homeric Greek, while in Young Avestan the aorist and perfect have both become relatively rare, and the verbal system is based upon the opposition present : imperfect-injunctive.

• In Old Avestan, the ablative singular is identical with the genitive except in the *a*-declension, while in Young Avestan and Old Persian the ablative marker of the *a*-stems has been transferred to the other declensions, as well.

• Young Avestan and Old Persian have developed a pronominal stem *di-*, replacing the Old Avestan stem *i-* (in Old Persian the Avestan stem *hi-* has been replaced by *ši-*).

• In Old Avestan, *hiiat̰* is both a relative pronoun and a conjunction, while in Young Avestan *hiiat̰* is a relative pronoun and *yat̰* a conjunction.

• Old Avestan has no trace of the pronominal inflection of "pronominal" adjectives, while Young Avestan uses pronominal endings (see §3.6). This point is routinely quoted to prove that Old Avestan and Young Avestan are also different dialects, not merely different stages of the same

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3. The corpus of Young Avesta contains the *Yasna*, *Vispered*, *Xorda Avesta* (Little Avesta), the *yašts* (hymns to deities), *Videvdad* (*Widēwdād*, *Vendidad*, a book of purification rituals), *Hērbedistān* and *Nīrangistān* (texts concerned with religious practice), and the small texts *Aogəmadaēca* and *Hādōxt nask* (concerned mainly with eschatological issues), the *Pursišnīhā* (a catechism), the *Frahang ī ōīm* (a list of Avestan words and their Pahlavi/Middle Persian translations), plus a few other texts. For editions, see Kellens 1988.

language; there is, however, only one example: OAv. *vīspåŋhō* 'all' (three times) ~ YAv. *vīspe*, and the masc. nom. pl. forms in *-āhah* were stylistic alternatives for any other masc. nom. pl. form; cf. OP *aniyāha* 'other', but *visaiy* 'all', so Old Avestan may well have had forms such as **vīspē* and **aniiē*;

   • Among the phonological differences the most important is the spirantization of voiced stops in Young Avestan, which produced pairs such as the proto-Iranian 2nd pl. mid. ending **duam* > OAv. **-duuə̄m* > *dūm*, but YAv. *-δβəm* (with *u̯* assimilated to the preceding spirant).

   On the whole, Young Avestan is linguistically closer to Old Persian than to Old Avestan, and it is possible that the developments shared by the two had taken place before the Old Persian tribes migrated westward about the turn of the millennium (Skjærvø 2003–4).

0.2. Young Avestan dialects

Various phonological and morphological features of Young Avestan have been ascribed to dialect differences. For instance, J. Schindler (1982) interpreted the different treatments of final **aŋh* (< IIr. **-ans*) in terms of dialects, and K. Hoffmann theorized Arachotian elements, among them *hu̯* > *x^v* instead of *huu-* and *VβV* > *Vu̯V* (Hoffmann and Forssman 1996: §§6.2, 63cg). Note also the alternation *VδV* ~ *VθV*, for instance, in *daδā-* ~ *daθā-*, which superficially at least corresponds to Manichean Middle Persian *day-* versus Parthian and modern Persian *dah-*. Other features ascribed to dialects are forms like *dahāka-* (not **daŋhāka-*) and the "stunted" genitives *zraiiā vouru.kaṣaiia* 'the Vourukasha sea' (Y 65.4 = Yt. 5.4 = Yt. 8.31) beside correct *zraiiaŋhō vouru.kaṣahe* (Yt. 5.42) (see also Beekes 1999: 63).

   The main problem with such theories is that we still do not have an exhaustive study of the manuscripts and individual scribal habits or of the formal aspects of the Avestan corpus. It is therefore a dangerous procedure to glean forms from a wide spectrum of texts and manuscripts and treat them as if the text corpus were uniform and the forms all equally reliable.

   Syntactical differences might carry more weight; for instance, in the *Videvdad* the expression 'but if (on the other hand)' is *āaṯ yezi*, but in the *Nirangistan* it is *yezi āaṯ*, which agrees with the use of OAv. *aṯ* in second position. These features have not yet been studied, however.

0.3. The Avestan text

The extant text of the *Avesta* is an "edited" text and does not necessarily in every detail reflect a genuine linguistic system. For centuries, during the oral transmission of the text, editors (*diascevasts*) worked to standardize it, and afterwards it was modified by scribes who spoke dialects or languages with phonological systems differing from that of the original Avestan languages. Thus, on one hand, the Old Avestan texts contain many elements that are clearly borrowed from or influenced by Young Avestan, and, on the other hand, the Young Avestan texts contain both elements that are imitations of Old Avestan (pseudo-OAv.)[4] and elements belonging to later stages of Iranian that were probably introduced by the scribes. This makes

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4. Some of these may be fragments of genuine Old Avestan texts (see Pirart 1992).

it almost impossible to determine which of the sound changes that we observe in our extant manuscripts belonged to the original language and which ones were introduced at various stages of the 1,000–1,500 years' oral and written transmission of the texts.

The earliest manuscripts of the Avesta are from the 13th and 14th centuries (*Vispered* ms. K7a: 1278?, *Yasna* mss. J2 and K5: 1323, *Videvdad* mss. K1: 1324, L4: 1323, *Xorde Av.* ms. Jm4: 1352), and, from the evidence of the manuscript colophons, all go back to single manuscripts for each part of the *Avesta* (*Yasna*, *Yašt*s, etc.) that were in existence around 1000 C.E. Most manuscripts of the *Avesta* are much later, however, and for some parts of the text the manuscript tradition does not go beyond the 16th–18th centuries (see Kellens 1998). This situation always has to be kept in mind when we discuss the Avestan language.

The Avestan text most often quoted, also for grammatical purposes, is that prepared by K. F. Geldner (1896). This edition is a "critical" edition in the sense that Geldner set out to list all—or at least all the most important—manuscript variants known to him. Since manuscripts reached him from various places at various times during the preparation of the edition, it is not a complete critical edition, however; it does not even include all the texts known in Geldner's time.[5]

For similar reasons, at the outset of the edition, Geldner did not yet have a clear idea of the relative importance of the manuscripts; this was formed only during the work and finally codified in the introduction to the final edition. Geldner therefore took as his primary standard the conventions of the previous edition, that of N. L. Westergaard (1852–54), which in turn was based primarily upon the Copenhagen manuscript collection. One of the implications of this is that Geldner's edition cannot be used directly as the basis for grammatical analysis (orthography, phonology, morphology). In fact, a new edition is sorely needed, one that includes an analysis of the manuscripts together with a reevaluation of the manuscripts (families, interferences, chronology, individual scribal habits) and rereading of the ones still available.[6]

0.4. The "Arsacid Avesta" and the Andreas theory

A theory was developed in the early twentieth century by F. C. Andreas (first in Andreas 1904) that the *Avesta* was written down in the Arsacid (Parthian) period (ca. 250 B.C.E.–ca. 240 C.E.) in an Aramaic consonant alphabet and that unusual or unexpected spellings in the transmitted text reflected erroneous vocalizations and wrong interpretation of ambivalent consonant signs on the part of the Sasanian transcribers. It was proved, however, by G. Morgenstierne (1942) that the "aberrant" orthography of the *Avesta* reflects a wholly consistent phonological system. Morgenstierne showed that the system of epenthesis, for instance, is internally consistent

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5. For manuscript abbreviations and descriptions, see the "Prolegomena" to Geldner's edition.

6. Authors of modern text editions and grammatical studies are becoming increasingly aware of this necessity.

and must therefore be a genuine linguistic phenomenon. The theory held hard, however, and was still applied, for instance, by Hoffmann (1958), but now it has been wholly abandoned.

0.5. Editorial interference and scribal errors

The text was deliberately changed by editors, as demonstrated by the repetition of preverbs in *tmesis* in Old Avestan, e.g.: <u>nī</u> *aēš^əmō* <u>nī</u>*.diiāt̰əm paⁱtī rəməm* <u>paⁱtī</u>*.siiōdūm* 'let wrath be tied down, let obstruction be cut back!' (Y 48.7), where the meter shows that the repeated preverbs were not original. Deliberate changes are also evident in various orthographic ideosyncrasies, the most important of which is the introduction of final -*ō* (1) in the first member of compounds (cf., beside the expected form *ahuraδāta-* 'established by Ahura [Mazdā]', the much more common type *daēuuō.dāta-* 'established by demons', *baɣō.baxta-* 'assigned by the assigner', etc.); (2) at morphological junctures, e.g., comparatives and superlatives in -*ō.tara-* and -*ō.tama-*; (3) in nouns in -*tāt-* (OAv. *karapō.tāt-* 'the title of mumbler'); and (4) especially in cases of false division: YAv. *uziiō.rəṇtəm* < *uziiar-* 'come up', **hispō.səṇte* < *hispas-* 'watch', *aš^əθβō.zgatəma-* < **aš.θβazga-* '?', *vīmanō.hiia-* < *vīmanahiia-* 'agnosticism(?)'; *parō.katarštəma-* < **paraka.tarštəma-* 'most feared by the other side(?)'; *parō.kəuuiδ(a)-* < **paraka.viδ(a)-* 'piercing distant (targets)'; *rᵃrō.mana-* < *ramrᵃ̄mana-* 'at peace(?)' (Yt. 13.29, mss. *rᵃraomanō* F1; *rᵃrō.manō* J10, *Xorde Avesta* mss.); note also *paṇcā.saduuar-* < *paṇcāsa + duuar-* 'having fifty doors(?)'. The -*ō* at the morphological juncture in forms like OAv. *gūšō.dūm* is probably a reinterpetation of forms with *u*-umlaut (*-*adūm* > -*ōdūm*), and the -*ō* in OAv. *drəguuō.d^əbiiō* < *drəguuaṇt-* 'full of deception' is a reinterpretation of forms with labialization. Other cases of false division include *gᵊ̄uš.āiš* for *gᵊ̄ušāiš* 'with the ears'.

Another editorial practice was the restoration of non-sandhi forms in sandhi: e.g., -*š.h*- for -*š*- before vowel (*aⁱβiš.huta-* 'filtered, pressed', *ārmaⁱtiš.hāg^ət̰* 'following [Lifegiving] Humility', *pasuš.ha^uruua-* 'cattle-guardian') and -*š*- for -*ž*- before voiced consonant (*xšuuaš.gāiia-* instead of **xšuuažgāiia-* 'distance of six steps', cf. *dužgaṇti-*).

Less commonly stops, affricates, and *m* were analyzed as two consonants, e.g., OAv. intervocalic *t* > *t̰.t* (*gat̰.tōi*, *gat̰.tē* 'to go', *āg^əmat̰.tā* 'come'); YAv. *c* [tš] > *t̰.c* (*frātat̰.caiiat̰* for **frātacaiia-* 'flow forth', *ar^ənat̰.caēša-* for **ar^ənacaēša-* 'who assigns blame[?]'); and OAv. *m* > *m.m* (*h^{ə̄}m^əmiiāsaⁱtē*, *h^{ə̄}m.miiāsaⁱtē* for **h^{ə̄}miiăsaⁱtē* 'is being steered'; *aēšəm.mahiiā* for *aēš^əmahiiā* 'wrath's').

Scribal errors abound, many of which are obvious, but some of which have been regarded as genuine linguistic forms and have played a role in grammatical descriptions, for instance, *ziiānīm*, acc. sg. of *ziiāni-* 'harm', on the basis of the manuscript reading *ziiå̄iienīm*, which, however, is a scribal error for *ziienīm* (Hoffmann 1975–92: 2.513–15).

0.6. What do grammars of Old Iranian describe?

In view of these characteristics of the extant Avestan text it is clear that it in no way can it be assumed to represent actually spoken languages, and,

consequently, any description of the Avestan languages based upon this text will also not be of actually spoken languages. Let us sum up:

1. At the time the sacred text became "crystallized," it probably represented a language no longer spoken by that current generation.
2. The oral transmission took place over a large territory, and we do not know from which local traditions the extant texts have come to us, which may all have left their inprints on the text in form of dialect features.
3. The oral transmission went on for hundreds of years, and we do not know to what extent phonological and grammatical features may reflect the languages of the transmitters rather than the original languages.
4. The last (Sasanian) oral transmitters no longer knew the "correct" text and would substitute common grammatical forms for less common ones (e.g., thematic for athematic forms) and insert passages they knew in places where they did not belong, upsetting the grammar (e.g., entire phrases in the nom. pl. instead of acc.) and the context.
5. Inferior oral tradition influenced the written tradition.

It is the result of these processes that the grammar of Avestan must describe, and it is therefore clear that what is most needed is an up-to-date taxonomy of the language and that descriptive models developed for living languages are not adequate for the purpose. The most serious consequence of this situation is that no exact phonemic analysis of the two Avestan languages is possible, since it is a concept presupposing the possibility of capturing an actual linguistic state.

Under these circumstances some scholars have chosen to describe a reconstructed (or phonemical), "corrected," version of the text (as in Duchesne-Guillemin 1936 and Beekes 1988). Interesting as such attempts may be, they do not provide a description of the language seen in the texts and are of little use to students at any level.

As for Old Persian, quite aside from the smallness of the corpus, two features need to be kept in mind:

1. The lateness of the language of the inscriptions in the history of Old Persian warns against forcing phonetic and grammatical forms too much into an Old Iranian mold; instead one should consider Old Persian as intermediate between the Old Iranian and the Middle Iranian language types (Skjærvø 1999a: 158–61).
2. The mixed-language type prevents us from grasping the genuine SW-Iranian phonological system.

0.7. Spelling conventions

Several features of Avestan and Old Persian orthography affect the interpretation of the morphological data. In Old Avestan, all final vowels are long, but in Young Avestan they are short, except in monosyllables. In Old Avestan, *i* and *u* before *-m* are regularly written long in the mss. (*-īm, -ūm*)

but, apparently, short or long according to their etymology before -*š* (-*ĭš*, -*ŭš*). In Young Avestan, however, the length distinctions have apparently been lost and new distributional patterns created, which have not been studied.[7] In standard transcriptions, with a few exceptions, *ī* and *ū* are preferred in these cases. Here, I have left length in the Old Avestan examples more or less as in the mss., but in the Young Avestan examples I have used *ĭ* and *ŭ* (though probably not consistently) to emphasize the non-etymological value of the manuscript spellings.

Similarly, for proto-Ir. **-am*, OP -*am*, OAv. usually has -*əm*, but -*ə̄m* in monosyllables, occasionally elsewhere. Rhythmic or syllabic principles may be involved (cf. the expression *narə̄m narəm* 'man by man' and *drūjəm* verse-final or before one consonant in *drūjə̄m dii-*, but *drujə̄m* before a vowel). Young Avestan has only -*əm*.

OP final -*ā* is from proto-Iranian **-a*, **-ā*, or **-āC*, while final -*a* is from proto-Iranian **-aC*. The Old Persian orthography does not distinguish between short or long *ĭ* and *ŭ* (non-final *ĭ* is written <i>; *ŭ* is written <u> or <u-v>; in final position they are written <-i-y, -u-v>). After *h*, *i* (and *ī*?) is not usually written in Darius's inscriptions, but frequently in those of Xerxes.

In Old Persian, *h* is often missing where it is expected by etymology, e.g., Ir. *hu-*, OP <u-v->; Ir. *aʰmi* = OP *aʰmiy* <a-m-i-y>, but also *ahmiy* <a-h-m-i-y>; Ir. -*ahi* = OP <-h-y> or <-h-i-y>; Ir. *ahi-* = OP <a-i->, etc. Original final consonants are missing, notably the common endings -*h*, -*t*, and -*n*. In transcriptions these "missing" letters are often added as subscripts (e.g., *abaraʰ*, *abaraᵗ*, *abaraⁿ* 'carried', *aʰmiy* 'I am') to show the etymology of grammatical forms and their relationship with Avestan forms, though most of them probably had no phonetic value.

In the description that follows I have sometimes cited morphemes in their proto-Iranian phonemic form, both for the sake of clarity and to save space, e.g., *i̯*, *u̯* = Av. *ii*, *uu*, OP *iy*, *uv*; **-ai*, **-au* = Av. -*ē̆*, -*aē°*, -*uuō*, -*ao°*, OP -*aiy*, -*auv*; **-ah* = Av. -*ō*, -*as°*, OP -*aʰ*; etc.

I have also followed the practice of writing epenthetic and anaptyctic vowels superscript to make the forms clearer.[8]

1. The morphology of Avestan: General remarks

The Avestan and Old Persian systems of declensions and conjugations are still of the Indo-Iranian type, involving a variety of stems, genders, numbers, cases, etc. Because of the limited material, especially Old Persian, the forms are not as well known as for Old Indic: some declensions and conjugations are known from only a few forms, sometimes only a single form. In unfavorable instances the Avestan manuscript tradition is so poor that

7. Since this article was submitted, this has now been done (Vaan 2003); I apologize for not being able to update this article to reflect these new insights.

8. Epenthetic vowels are *i* and *u* written before a palatalized or labialized consonant, e.g., *paⁱti* < **pati*, *haᵘruua-* < **haru̯a-* 'entire'. Anaptyctic vowels are inserted between consonants to "ease" the pronunciation, e.g., OAv. *dᵊbāuuaiia-* 'deceive', *azdᵊbiš* < *ast-* 'bone', *pᵃtarə̄m* 'father'. Here, I have omitted the epenthetic *i* in *anii* (not *aⁱnii*), but kept it in *aⁱnĭ̄*.

the correct forms cannot be determined (e.g., gen.-dat. sg. of *jaini-* 'woman': *janiiaoš* or *janiiōiš*).

The morphological categories are the same in all three Old Iranian languages, but with some individual modifications, such as the Young Avestan and Old Persian marking of the abl. sg. in all declensions; the merger of the gen. and dat. (loss of dat. forms) and ins. and abl. in Old Persian; the development in Young Avestan and Old Persian of an augmented optative to denote repetition in the past (cf. Eng. 'he would do').

1.1. Allomorphology (morpho-phonology)

Avestan and, to a lesser extent, Old Persian are characterized by numerous morphophonological variants, which make especially the Avestan morphology very irregular. There are two principal kinds of variants, those due to diachronical developments and those due to analogy. Some of these developed in (or before) Indo-Iranian, some in Proto-Iranian, and some in Avestan and/or Old Persian only. The most important are:

• The Indo-European ablaut-system affected vowels of roots and stem morphemes and initial and final consonants of roots (e.g., stop ~ palatal).

• Proto-Iranian consonant changes affected consonants at morpheme borders.

• Avestan palatalization and labialization affected the vowels of roots and endings.

• Median forms in Old Persian.

1.2. Ablaut

The original ablaut was basically *ā ~ a ~ nil*, and in diphthongs, e.g., *āi ~ ai ~ i*, occasionally *i̯ā ~ i̯a ~ i*. In Indo-Iranian, the original ablaut is obscured by various sound developments:

• Brugmann's Law, by which an IE *o* in an open syllable became *ā*, coinciding with the long grade

• The disappearance of a post-vocalic laryngeal (*H*), by which *aH* before a consonant > *ā* and *H* between vowels was lost, leaving a hiatus

• The frequent changes in Avestan in vowel quantity caused by stress shifts (?), which caused long *ā* to be shortened: *āpəm* 'water' ~ *apəmca* and *āpō* (nom.) and *apō* (acc.) ~ *apasca* (nom., acc.); and short *a* to be lengthened: *kauuaiō* 'poet priests' ~ *kāuuaiiascā*; *ašīm* 'reward' ~ *ārˀ⁹ītīmca* (*Pursišnīhā* 39; beside common *ašīmca*)

The Old Iranian reflexes of the ablaut are set out in table 1 (tables begin on p. 910).

Avestan often has full grades in initial position where Old Indic has zero grade: *ya-* for *i-* (Av. *yaštá-* 'sacrificed', OInd. *iṣṭá-*) and *va-* for *u-* and *uH-* (Av. *vaziia-* 'be led', OInd. *uhyá-*; Av. *varˀ⁹z-* 'invigorate', OInd. *ūrj-*). Note also the distribution of initial * r̥-* and *ra-* in °*ərˀ⁹ta-* (*aša-* '[cosmic] order'), etc., but *ratu-* '(cosmic) model'; adjective OAv. *ərˀ⁹θβa-*, YAv. *raθβiia-* 'in agreement with the models', which correspond to OInd. *r̥tá-* and *r̥tú-*, *r̥tvíya-*. Since there is no good reason why Av. should have changed *ərˀ⁹t- to *rat-* only in *ratu-*, it would seem that *ratu-* is the original form, which was changed in analogy with the other forms in Old Indic.

We also occasionally find Ir. *ai* and *au* where Old Indic has long *ī* and *ū* (Av. *aēšā-* 'plow', OInd. *īṣā-*; OP *gaudaya-* 'hide', Av. *gŭzaiia-*, OInd. *gūhaya-*), a development that at least *appears* to be parallel to that of *$r̥H$ > Ir. *ar* (OInd. *ir*, *ūr*).

Avestan also has ambikinetic and holokinetic ablaut types:

dā^{u}r-u 'tree, wood' ~ in compounds °*dr-u-*, loc. sg. *drao°*, gen. sg. *dr-aoš*
ja^{i}n̥-ti 'he smashes' ~ 3rd pl. *γn-an̥ti* 'they smash', pptc. *jata-stao-mi* 'I listen' ~ 3rd pl. *stuu-an̥ti*.
pan̥tå (< *pantaH-s*) 'road' ~ gen. sg./acc./pl. *paθō* (< *pn̥tH-as*)

According to their vowel grade, stems are commonly classified as:

• "Strong" stems = with (1) long or (2) full grade, e.g.: nom, acc. sg., nom. pl. of athematic nouns, pres. ind. sg. of athematic verbs
• "Weak" stems = with (1) full or (2) zero grade, e.g., gen. sg., acc., gen. pl. of athematic nouns; pres. ind. pl. of athematic verbs

The proto-Iranian long diphthongs *āi* and *āu* remained in Old Iranian. The short dipthongs *ai* and *au* remained in Old Persian, but underwent numerous modifications in Avestan:

	ai		*au*	
	internal	final	internal	final
OAv.	aē, ōi, əi, əuui	-ē, -aē°	ə̄u, ao	-ao(?), -uuō
YAv.	aē, ōi	-e	ao (ə̄u)	-uuō, -ao°
OP	ai	-ai	au	-auv

Final -*ĕ̄* from *-ai* palatalizes preceding consonants, e.g., *-ahai* > -*aŋ́he* (in this description I use the symbol -*^{i}ē*,-*^{i}e* < *-ai*). Note especially the development of -*u̯ai* > -*u̯^{i}ē* > postconsonantal -*uiiĕ̄*, postvocalic -*uue*, -*oe* (e.g., *i̯au̯ai* > *yauue*, *yaoe*), but before enclitic > -*uuaē°*.

The Avestan diphthongs *ai*, *ei*, etc., and *au*, *ou*, etc., are the result of palatalization and labialization (commonly transcribed as *a^i*, *o^u*, etc.). Av. *āi* and *āu* can be original or the result of palatalization and labialization (*ā^i*, *ā^u*).

1.3. Avestan vowel alternations

Of the other indigenous Avestan developments, those affecting *a* and *ā* are crucial for understanding the morphology. Among these, the two most important are:

1. Backing of *a* to the central position before nasals > *ə* or *ə̄*, which were further palatalized (> *i*) or labialized (> *u*) by preceding consonants
2. Umlaut, that is, fronting (palatalizing) of *a* and *ā* to *e* or *ē* before high front vowels, but only when preceded by a palatal consonant (*i̯, c, j*), and backing and rounding to *o* or *ō* before *u* and often in labial environment

The thematic vowel in nouns and verbs (including full-grade endings of athematic verbs) regularly undergoes the above phonetic changes, most consistently in Young Avestan, but also in Old Avestan.

a > ə, ə̄:

   before *-m*:

   in the final syllable **-am > -ə̃m* (OAv. *drujə̃m* 'deception', YAv. *ahurəm* 'lord') and in the 1st sg. secondary ending (OAv. °*grabəm* 'I seized', YAv. °*barəm* 'I carried')

   before *-n*:

      in the final syllable **-an(t) > -ə̃n* (OAv. °*jə̄n* 'he smashed', YAv. *barən* 'they carried')

      in the 3rd pl. endings **-anti, -antⁱe > -əṇti, -əṇte* (examples, see below) with the exceptions described below

ə > i (regularly in YAv., sporadically in OAv.):

   regularly after *c* and *j* (YAv. *drujim*; *tacin, taciṇti < tac-* 'run, flow')

   after *i̯* in *i̯a*-stems, but in verbal forms apparently restricted to the position after sibilants and *θ* (YAv. *mašīm < mašiia-* 'mortal man'; *uxšin < uxšiia-* 'grow'; *ᵘruuisiṇti < ᵘruuisiia-* 'to turn', *ⁱriθiṇt- < ⁱriθiia-* 'pass away'); otherwise, *-i̯anti (-i̯antī)* and *-i̯antⁱē* usually remain as *-iieⁱṇti, -iieṇte*[9]

   in the sequences *-ai̯am > -aēm, -ai̯an > -aēn* (*gaēm < gaiia-* 'life'; *cikaēn < cikaiia-* 'atone for'); *-āi̯am > -āim, -āi̯an > -āin* (*haxāim < haxaē-* 'companion'; *gə̄ruuāin < gə̄ruuāi̯ia-* 'seize'); (*-ī̆ʾam >*) *-ī̆i̯am > -ī̆m* (°*jī̆m* 'living'), and *-ai̯ai̯an > -aiiaēn* (*nidarˀzaiiaēn* 'let them chain'); for *-aēn*, more commonly, we find the uncontracted form *-aiiən* (*apataiiən* 'they used to go falling about'), which is also commonly substituted for *-aiiaēn*[10]

ə > u:

   before *-n* and *-m*: regularly after *u̯* (*hoᵘrum* 'whole' < **haru̯am*), including *u̯ < β* (*graom < *grau̯am < *graβa-* 'handle')

      the sequences *-au̯am > -aom, -au̯an > -aon* (*haom* 'own'; *baom, baon* 'I/they became'); *-āu̯am > -āum, -āu̯an > -āun*; and (*-ū̆ʾam >*) *-ū̆u̯am, -ū̆u̯an > -ū̆m, -ū̆n* (°*sū̆m* 'vitalizing'; *bun* 'they shall be'); instead of *-aom* and *-aon*, the manuscripts also have *-āum* and *-āun* (*kərˀnāun* 'they did')

   for *-(ā̆)uuaⁱṇti, -(ā̆)uuaṇte, -(ā̆)uuaṇta*, the expected contractions **-aoṇti/ -āuṇti*, etc., are not found *(YAv. bauuaⁱṇti* 'they become', etc.), with the exception of one example of **-au̯anta > -āuṇta* (YAv. *adāuṇta* 'they chattered' with *āu*, as commonly, substituted for *ao*), and the suffix *-ahu̯aṇt-* regularly > *-aŋhuṇt-* (for which *-aŋᵛhaṇt-* is commonly found in the manuscripts)

a > e:

   before *h*:

      gen. sg. of *i̯a*-stems: *-iiehe* (YAv. *mašiiehe*)

      2nd sg. act. and mid. and inf.: *-i̯ahi > -iiehi* (OAv. *xšaiiehī < xšaiia-* 'be in command', YAv. *srāuuaiiehi < srāuuaiia-* 'recite'); *-i̯ahai > -i̯ahⁱē >*

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9. Some of the oldest mss. (including Indian Pahlavi *Yasna* and Pahlavi *Videvdad*) often(?) have *-iia(i)ṇt-* instead of *-iieiṇt-*.

10. Note *snāδaiiən* for **snāi̯ai̯an* from **snāi̯a-* (*snaiia-*) 'wash'.

-*iiehe*, -*iieńhe* (YAv. *maniiehe* < *maniia*- 'think'; OAv. inf. *srāuuaiieńhē*)

before *t*:

3rd sg. and pl. act./mid.: -*i̯atī* > -*i̯ati* > -*iieⁱti*; -*i̯atai* > -*i̯atⁱē* > -*iiete*[11] (OAv. *srāuuaiieⁱtī*, *dāiietē* < *dāiia*- 'to place', *vašiietē* < *vašiia*- 'undulate')[12]

before *nt*: -*i̯anti* > -*iieⁱṇti*, -*i̯antⁱē* > -*iieṇte*: *baiieṇtē* < *baiia*- 'to fear'; *fšuiieṇtē* < *fšuiiaṇt*- 'husbandman'

in YAv after *i̯* in final position after *n*, *r*, *s*: -*i̯a* > -*e* (e.g., nom. sg. *naⁱre* < *naⁱriiā*- 'manly')

a > *ō*:

sometimes in OAv.: by *u*-umlaut (*vərᵊziiō.tū°* < *vərᵊziia*- 'produce', *vātōiiō.tū* < *vātaiia*- '?', *ābaxšō.huuā* < *ābaxša*- 'partake of', *gūšō.dūm* < *guša*- 'listen', *mazdåŋhō.dūm* < *mazdā*- 'place in one's mind', *paⁱtī.siiōdūm* < *paⁱti.siia*- 'cut back', *dīdraɣžō.duiiē* < *dīdraɣža*- 'wish to hold firmly'); in labial environment: *auuō.buuaⁱtī* 'will come down'; cf. *auuā* 'down', *uzᵊ̄mōhī* '?' < *-mahi*. In Young Avestan, we somtimes find -*uuō* instead of -*uua* (e.g., ins. sg. *bāzuuō* for *bāzuua* < *bāzu*- 'arm')

ā > *ə̄*:

before *m* in OAv. *strə̄m* 'of the stars'; *x́iiə̄m* 'I wish to be'; both these words are disyllabic, which shows that the process is post–Old Avestan

ā > *e*:

when preceded by *i̯* and <u>and</u> followed by a nasal (*m*, *n*) <u>and</u> *i*, *ī*, or *e*:

acc. sg. of *i*-stems (YAv. *ziiēnĭ̆m* < *ziiāni*-)

1st sg. ind./sbjv. -*i̯āmi*, -*i̯āni*, -*i̯ānⁱē* (< -*i̯ānai*) > -*iiemi*, -*iieni*, -*iiene* (YAv. *jaⁱδiiemi* 'I beseech', *zbaiiemi* 'I invoke'; OAv. *aiienī* 'I shall go'; YAv. *taᵘruuaiieni* 'I shall overcome'; *hācaiiene* 'I shall induce')

the forms in -*iiāmi*, -*iiāni* are sometimes retained/restored by analogy, especially in the vicinity of forms with regular -*āmi*, not preceded by *ii* (YAv. *yāsāmi* . . . *jaⁱδiiāmi* 'I request . . . I beseech', Y 65.11, and elsewhere)

1.4. Consonant alternations

The consonant changes that affect the morphology of Old Iranian are of various ages: proto-Indo-Iranian, proto-Iranian, and later.

Among the proto-Indo-Iranian changes are the following:

• Palatalization of the velars *k*, *g*, *gʰ* > *č*, *ǰ*, *ǰʰ* before front vowels and glides in Indo-Iranian; in proto-Ir., *ǰ* and *ǰʰ* then merged into *ǰ* (*aogō* 'strength' ~ *aojaŋhā*, cf. Latin *ge<u>n</u>us* ~ *ge<u>n</u>eris*, Greek *gé<u>n</u>os* ~ *géne<u>h</u>os*; OP *drauga*- 'deception' ~ *dᵘrujiya*- 'to lie' < **drug-i̯a*-)

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11. There seems to be a tendency to spell this ending without epenthesis, but no comprehensive survey of manuscript readings has been made.

12. But *aēnaŋhə̍ⁱti* 'comits sin against' (Y 9.29) < **-ahi̯ati*.

• The developments of proto-Indo-Iranian *s: after the vowels *ĭ* and *ŭ* (including the diphthongs *ai* and *au*, as well as *in* and *un*) and after the consonants *r*, *k/g/gh*, IE *k̂/ĝ/ĝʰ*, and *p/bʰ*, IIr. *s became *š* (or *ž*), the so-called *ruki* rule (YAv. *ga^iri-š* 'mountain', *āp-š 'water' > nom. sg. *āfš* ~ pl. *āpō*, **di(d)b-ža-* 'seek to deceive' *diβža-* ~ *dauua-* 'deceive' < **daβa-*, etc.). It remained as *s* before stops and affricates, as well as after dentals, which were assimilated, the resulting geminate being then simplified (*t/d + s > ss > s*; °*bər°t-s* 'carrying' > °*bər°s*). In other positions *s* became proto-Iranian *h*, which in turn underwent various changes. Endings beginning with proto-Indo-Iranian *s, therefore show up in Old Iranian variously with *š*, *s*, *h*, or *nil*.

The most important consonant alternations shared by the Old Iranian languages are the following (others appear in table 2):

• In general *p*, *t*, *k* > *f*, *θ*, *x* before consonants (including the IIr. laryngeal); except that Av. *p* remained (was restored?) before *t*.

• Indo-Iranian *s* between vowels or after a final vowel > *h; in sandhi before enclitic *-ca* (and a few other instances) the original *s* was retained in Avestan: *-as°*, *-ås°*, but became *š* in Old Persian (Ir. *ahurah > Av. *ahurō* ~ *ahurasca*; Ir. *kah 'who?' > Av. *kō* ~ *kasci̯t* 'any', OP *kašciy*).

• Dental + dental > sibilant + dental: *t + t* always > *st*; *d + t* or *d + d* > *st* or *zd* (originally, *zd* < IIr. *d + dʰ*).

• All geminates were simplified (**ap-b°* > **abb°* in YAv. *a^iβiiō*, OP *abiš*).

• Dental before sibilant was lost (assimilation + simplification); after sibilant it was somtimes lost, sometimes remained (OAv. 3rd sg. °*cinas* < √*caēš* 'assign', ᵘ*rūraost* < √*raod* 'lament', *xšnāuš* < √*xšnao* 'satisfy', *dār°št* < √*dars* 'see' (?); see Tremblay 1999).

• Indo-Iranian *s* and *š* were voiced > *z* and *ž* before *b*, *d*, *g*, *j* (Av. *s-di > *zdī*, YAv. *vāxš + -biš > vāɣž^ibiš < vắk/c-* 'word').

Proto-Avestan consonant changes include the following:

• Between vowels (with some exceptions) *h > ŋh* (with preceding *ā > å*); final *-ah > -ō*, final *āh > -å*; alternating with *s* in sandhi (*manah-*: nom.-acc. dual *manahī* ~ ins. sg. *manaŋhā* ~ nom.-acc. sg. *manō* 'thought', *manascā* ~ nom.-acc. pl. *manå*).

• Final proto-Iranian **-aŋh* (< IIr. *-ans*) > **-ə̄ŋg* > OAv. *-ə̄ṇg*, YAv. *-ə̄* (occasionally YAv. *-ą*), sandhi *-ə̄ṇgs°*, *-ə̄s°*, *-ą̇s°*; in YAv. **-u̯ə̄ > -u̯ū* (OAv. *mašiiə̄ṇg* 'mortals', *sə̄ṇgha̧scā* 'announcements', YAv. *vīspə̄*, *haoma̧* 'haomas', *daēuuū/daēū* 'demons').

• Proto-Iranian *s*, *z* (< IIr. *ć*, *ȷ́*, *ȷ́ʰ*) > *š* before *t* and partly before *n*; they remain before *m*.

Indigenous Old Persian consonant alternations include the following:

• Final **-h* in sandhi before enclitics in *c* > *-š* (OP *kašciy*, *cišciy* = Av. *kasci̯t*, *cisci̯t* 'anybody/thing');

• Iranian *θi̯ > šiy* (OInd. *satya-*, Av. *ha^iθiia-*, OP *hašiya-* 'real, true').

• Iranian *θr ~ ç*[13] (OInd. *putra-*, Av. *puθra-*, OP *puça-* 'son').

• Old Persian *θ*, resulting from the Iranian morphophonological alternation *t ~ θ*, spread to forms where it was not historically expected (e.g.,

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13. A sibilant of uncertain nature.

gātu- 'place, throne': nom. ***gātuš*, gen. ***gāθu̯ah*, which produced a new stem *gāθu-*).

Most of the Old Persian ~ Median consonant alternations do not affect the morphology. The most important are the following:

Indo-Ir.	OP (= Av.)	Med.	Examples:
*ć	θ	s	*aθanga ~ asan-* 'stone'
*ǰ⁽ʰ⁾	d	z	*adānā* 'knew' ~ *vazạrka-* 'great'
*ću̯	s	sp	*uvasa ~ uvaspa* 'having good horses'
*ǰ⁽ʰ⁾u̯	z	zb	*hizānam* 'tongue' ~ *patiyazbayam* 'I invoked'
*ti̯	ši̯	θi̯	*hašiya* 'real' ~ *xšāyaθiya* 'king'
*tr	ç	θr	*xšaça* 'command, empire' ~ *xšaθrita* proper name

The dialect status of the two treatments of Indo-Iranian ***ćt* and ***ǰt* : *št* and *st* (Av. *št*), as in ʰ*ufraštam ~* ʰ*ufrastam* 'well-punished', is unclear.

2. Verb system

2.1. Introduction

The verb system contains finite and non-finite forms, distributed over the following categories:

• *Tense* or *aspect*, relating an action to the present time of the speaker as taking place before, during, or after and as having been completed or not.

• *Mood*, describing the action as real, unreal, foreseen, etc.

• *Voice*, describing the action as affecting another (active), being done in the subject's interest (middle), or suffered by the subject (middle, passive). Finite forms have the categories of *number* and *person*, while the non-finite forms behave like nouns (*infinitives*) and adjectives (*participles*).

Like nouns, verb stems are classified as vocalic or consonantal. Stems ending in *-a* are called *thematic*; all the others are *athematic*: stems ending in consonants (including the IIr. laryngeal **H*) or semi-vowels (*i̯*, *u̯*) or diphthongs.

The endings are basically the same in the two classes, but in the athematic conjugations frequent morphophonological changes result from the combinations of final consonant of the stem plus the initial consonant of the ending. The passage of athematic verbs into the thematic conjugation is frequent both in Avestan (where it is sometimes the result of poor manuscript transmission) and in Old Persian.

2.1.1. Tenses

The Old Avestan tenses are *present* 'he does, he is doing', *imperfect* 'he did, he was doing', *aorist* 'he did, he has done', *perfect* 'he has (always, never) done' or 'he did and now is' (*present perfect*), and probably a *pluperfect* in the function of preterite of the *present perfect* 'he had done and now was'.

The notion of past could be emphasized by the addition of the *augment* (*a-*) to the imperfect/injunctive and the aorist injunctive. In Old Persian, the past tenses always have the augment, but in Avestan the augment is

rare and its function not well understood. In Young Avestan, there are, moreover, very few clear examples of the augment, as the preverb *ā-* is frequently shortened to *a-* and the augment can be lengthened to *ā-*.

Young Avestan and Old Persian still have several aorist forms, but they are used mainly in the optative; the indicative and subjunctive are rare and limited to special, probably standard, formulaic contexts. The perfect is used in Young Avestan in its old functions, though there are few forms. The perfect optative is used as *irrealis* in both Young Avestan and Old Persian. The common past narrative tense is the present injunctive in Young Avestan and the augmented imperfect in Old Persian.

In both Young Avestan and Old Persian, the optative is used to express repeated or habitual past action (cf. English 'he would go'). It then takes the augment, regularly in Old Persian and occasionally in Young Avestan: YAv. *auuaēnōiš* 'you would see', *auuarōiṯ* 'he would carry' (< *bara-*), *apataiiən* 'they would go about falling all over', *aδaxšaiiaētā* 'he would mark out(?)', **apərᵊsaiiatəm* (mss. °*saētəm*) 'they [dual] would converse'; *nišāδaiiōiš* 'you would set down', *xšaiiōiṯ* 'he would rule', *frasrāuuaiiōiṯ* 'he would recite', *fraorənaēta* (< *fra-u̯ərᵊn-*) 'he would profess', *frastarᵊnaēta* 'he would spread out', *frāiiazaēta* 'he would sacrifice'; OP *avājaniyā*ᵗ 'he would kill', *akunavaya*ⁿ*tā* 'they would do'.

A periphrastic perfect formed by the perfect participle in *-ta* plus the verb 'be' (similar to German *Ich bin gewesen* and French *je suis allé*) is seen occasionally in Young Avestan. In Old Persian, it appears to have replaced the old perfect indicative in its function of conclusive statement (*ima taya manā kṛtam* '[all] this that I have done').[14]

2.1.2. Moods

There are five moods: *indicative* 'he does, he is doing', *subjunctive* '(that) he (should) do', *imperative* 'do!' *optative* 'may he do, he should do, (I wish) he would do', and (present, aorist) *injunctive* 'he did, has done'.

The subjunctive is obtained from the indicative by the lengthening of the thematic vowel in the thematic conjugations and the addition of a thematic vowel in the athematic conjugations. The subjunctive forms of athematic verbs are therefore formally often indistinguishable from thematic indicative forms. To distinguish between the two moods, athematic verbs frequently adopt thematic subjunctive endings. The only subjunctive ending not found in the indicative is the 1st sg. sbjv. *-ǎni*, vs. ind. *-(ā)mi*. In the optative, athematic verbs add the formant **-i̯ā-/-ī-* (Av. *-iiā-*, OP *-iyā-*) to the root; thematic verbs add *-ī-* to the thematic vowel to obtain the optative formant **-ai-* (Av. *-aē-*, *-ōi-*, *-aii-*, OP *-ai-*, *-ay-*). The stem of the imperative is identical with that of the indicative, but it has its own set of endings.

2.1.3. Voice

There are two *voices*: active and middle. Verbs can have active and/or middle forms. Some verbs have only active forms, some only middle

14. In Middle Persian and some other Middle Iranian languages this eventually became the regular past tense.

forms, and some both active and middle forms. Only in the third group can the middle forms have a special function, different from that of the active forms.

Intransitive verbs usually have only active or only middle forms, while transitive verbs can take both active and middle forms. If they do, then most often the distinction between the two forms is active : passive; more rarely the middle denotes that the action as being performed in the interest of the subject. This is the case when the verb also has a special passive form. Occasionally the middle forms of a verb have the same meaning as the active ones, especially in the case of verbs of motion. Examples:

• Middle verbs without active counterpart: *maniia-* 'think', *yaza-* 'to sacrifice', etc.

• Passive: *aza-* act. 'lead, take (away)' ~ mid. 'be led, taken away'; *vaēna-* act. 'see' ~ mid. 'be seen'; *bara-* act. 'carry' ~ mid. 'ride' (lit., be carried), etc.

• Action performed in the interest of the subject: *paca-* act. 'cook' ~ mid. 'cook for oneself'; *varᵊδaiia-* act. 'increase (something else), enlarge' ~ mid. 'increase (by oneself), become larger', etc.

• Same meaning as active: *fracara-* act., mid. 'go forth'; OP *ah-* 'be', *ai-* 'go', both with 3rd sg. impf. act. ~ 3rd pl. impf. mid. (*āha* ~ *āhaⁿtā*, *āiš* ~ *āyaⁿtā*)

• Differentation of meaning: *hišta-* act. 'to stand = take up a position', mid. 'to stand = to be standing'; *daδā-/daδ-* act. 'to make, give', mid. 'to take (on), receive'

The passive ('it is done, he is killed') can be expressed by middle forms or by a special present stem in *-i̯a-* (Av. *-iia-*, OP *-iya-*; see below 2.1.4.3).

A special Indo-Iranian 3rd sg. passive form was made from the aorist stem with the ending *-i* (OAv. *-ī*, YAv. *-i*). In Young Avestan, this form is also made from the present stem (*ᵊrᵊnāuui* 'was set in motion') and from the perfect stem (*āⁱδi* 'is/was said'). The extension may have resulted from the fact that, in verbs with root-stem presents, the stems of the 3rd sg. passive and the present were the same; cf. *jaini* 'was smashed', present stem. *jan-*.

2.1.4. Stem formations

2.1.4.1. Ablaut in verbs

The athematic verbs, like the athematic nouns, show ablaut, typically distinguishing lengthened grade ~ full grade ~ zero grade in the root syllable (e.g., Av. *mrao-/mru-* 'say') or the stem formant (e.g., Av. *-nao-/-nauu-* ~ *-nu-*, OP *-nau-/-nu-*).

The lengthened grade is found only in the "Narten" presents, the *s*-aorist ind. sg., and in some 3rd sg. perfect forms of roots of the type C_1aC_2:

• "Narten" present: OAv. *stāumī* 'I praise', YAv. *nāismī* 'I scorn' (for *nāin-mi* after *nāis-t* < √naēd; Tremblay 1999)

• Aorist 2nd/3rd sg.: OAv. *dāiš* 'you showed/have shown', *xšnāuš* 'he has favored', *dārᵊšt* 'he has seen(?)'

• Perfect 3rd sg.: OAv. °*nᵊ̄nāsā* 'has perished', *hišāiiā* 'has bound', YAv. *buuāuua* 'has become', *daδāra* 'has held up'

The full grade is found in the present, aorist, and perfect sg. ind. (with the above exceptions), throughout the paradigms in the subjunctive, and in the sg. imperative, and, occasionally, in the 2nd plural present indicative and imperative.

The zero grade is found elsewhere: in the dual and plural of the present, aorist, and perfect, in the 3rd plural imperative, and throughout the optative.

In the 3rd plural present we often have ambikinetic ablaut and in the 2nd and 3rd sg. optative endings, apparently conditioned by (proto-Av.) stress patterns: unstressed zero grade of the root + stressed full grade of the ending (-*ənti*, -*ən*; -*iiā̊*-, -*iiāt̰*, e.g., *ah*- 'be': *ah-mi* ~ *h-ənti* ~ *h-iiāt̰*) or stressed full grade of the root + unstressed zero grade of the ending (-*a*ⁱ*ti* and -*at̰* < *-*n̥t(i)*; -*iš*, -*īt̰*, e.g., *dā*- 'place, give': *dadā-*ⁱ*tī* ~ *dad-a*ⁱ*tī*, *dad-at̰* ~ *da*ⁱ*d-īt̰*).

2.1.4.2. *Present system*
Present stems are divided into athematic and thematic conjugations in the traditional manner. Each conjugation contains a miscellany of stem formations.

The athematic present conjugations.

In the athematic conjugations the present stems end in consonants or in a vowel, short or long (laryngeal stems). All athematic stems show ablaut, and numerous sandhi phenomena occur between the final consonants of the stem and the initial consonants of the endings.

There are the following types.

A. Root stems consist of the root itself, modified only by ablaut and internal sandhi changes, e.g., Av. *ah-/as-/h*- 'be', *aē-/i*- 'go', *jan-/ja-/ɣn*- 'smash', *vas-/us*- 'wish', /*stao-/stu*- 'praise', *mrao-/mru*- 'say'; OP *ah-/as*-, *ai*-, *dī*- 'rob', *jan*-, *pā*- 'protect', *ā-xšnau-/ā-xšnu*- 'hear'.

A subgroup of root-presents are the so-called Narten presents, which have lengthened grade in the present indicative and injunctive singular (Av. *tāšti*, *nāist* < √naid).

B. Reduplicated stems are identical with the root stems plus reduplication. The reduplication is of two types, either with a short vowel or with a long vowel or a diphthong or two consonants ("intensives").

1. Av. *daδā-/daδ*- 'place, give', *didaē-/di*ⁱ*dii*- 'see', *hiš.hak-/hišc*- 'follow'; OP *dadā*- 'place, give'

2. Av. *zaozao-/zaozu*- 'keep invoking', *carᵊkar-/carᵊkərᵊ*- 'keep singing', *sⱥsaŋh*- 'keep announcing'

C. Stems with *n*-infixes are originally roots of the type C_1VC_2 (or $C_1VC_2C_3$) which formed their present stems by infixing -*n*- before the last consonant $C_1V\text{-na-}C_2$–/$C_1V\text{-n-}C_2$–. The root itself is always in the zero grade, while the suffix shows ablaut. There are three main types, those from roots ending in -*u̯*, in a laryngeal -*H*, or in another consonant.

1. Stems from roots ending in a consonant other than *u̯* or *H*, e.g., Av. *cinah-/ciš-* 'assign' (< *cį̌š-*) < *ci-na-s-/*ci-n-s-; *vinad-/viṇd-* 'find' < *vi-na-d-/ vi-n-d-; *mərənak-/mərəṇk-* 'destroy' < *mr̥-na-k-/*mr̥-n-k-.

2. Stems from roots ending in *H* were originally of the type CV-na-H-/CV-n-H-. In Indo-Iranian, the laryngeal combined with the infix -na- to produce the suffix -nā-/-n-, e.g., YAv. *frī̆nā-/frī̆n-* 'receive as guest friend(?)' < *fri-na-H-/*fri-n-H-; *miθnā-/–* 'dwell' < *mit-na-H-/*mit-n-H-; *zānā-/zān-*, OP *dānā-/–* 'know, *savoir*' < *ĵn̥H-na-H-/*ĵn̥H-n-H-; YAv. *zī̆nā-/zī̆n-*, OP *dī̆nā-/–* 'take away' < *ĵi-na-H-/*ĵi-n-H-. Before consonant, the weak forms tend to lose their *n*, nasalizing the preceding vowels, sometimes also losing the nasalization, e.g., OAv. *huu̯amahī* < *huṇm-*, *friiamahī* < *friṇm-*, *cīšmahī* < *ciṇšm-*; YAv. *viste* < *vi̯ste* < *vind-tai*.

3. Stems from roots ending in *u̯* were originally of the type CV-na-u̯-/CV-n-u̯-. The *u̯* combined with the infix -na- to produce the suffix -nau-/-nu-, e.g., Av. *sᵘrunao-/sᵘrunu-* 'hear' < *sr̥-na-u-/*sr̥-n-u-; OAv. *dᵊbᵊnao-* 'deceive'.

Often this stem-type is formed from roots that do not end in *u̯*, so descriptively we are dealing with a suffix -nao-/-nu-, e.g., Av. *kərᵊnao-/kərᵊnu-*, OP *kunau-*[15] 'do, make' < √kar (pptc. Av. *kərᵊta-*, OP *kr̥ta-*); YAv. *aš-nao-/ašnu-* 'reach' < *Hn̥ć-nau-* (inf. OAv. *āždiiāi* < *a_d-* or *ā-a_d-*); *sri-nao-/srinu-* 'lean' < *sri-nau-* (pptc. *srita-*); Av. *–/daržnu-*, OP *dr̥šnau-* 'dare' < *dr̥š-nau-*.

The thematic present conjugations.
In the thematic conjugations all the present stems end in the vowel *a*. There are the following subgroups:

A. Stems with *a* added to the root
1. Root with zero grade: Av. *vīsa-* 'be ready', *hərᵊza-* 'release'; OP °*mr̥da-* 'wipe', °*har̥da-* 'release', etc.
2. Root with full grade: Av. *bara-* 'carry', *naiia-* 'lead', *maēza-* 'urinate', *bauu̯a-* 'become', *saoca-* 'burn'; OP *bara-*, *naya-*, *vaina-* 'see', *bava-*, etc. This is the most common type.
3. Root with long grade: Av. *brāza-* 'shine', *frāda-* 'make prosper', etc.

B. Stems with *i̯a* added to the root
1. The root has the zero or full grade: Av. *paⁱδiia-* 'lie down', *spasiia-* 'keep an eye on', *maniia-* 'think', *uxšiia-* 'grow', *buⁱδiia-* 'notice', *miriia-* 'die', *θrāiia-* 'protect'; OP *jadiya-* 'ask for', *durujiya-* 'tell a lie', *mariya-* 'die', °*stāya-* 'place', etc. In Avestan, the type with long *ā* usually has its *ā* shortened: °*staiia-*; this type is different from the type in -ai̯a-, which has short *a* in both Avestan and OP (see below). Av. *zaiia-* 'be born' is from *zāi̯a- < *ĵn̥H-i̯a-* (OInd. *jāya-*).

To this class belong the passive forms in -i̯a-, derived from transitive verbs (see below).

15. For *kr̥nau-*, with irregular sound development in high-frequency word.

2. Stems in *-āi̯a-* > Av. *-ă̆iia-*: *gəⁿruuă̆iia-* 'seize', OP *gr̥bāya-*. These few verbs may have alternate present stems in *-nā-/-n-* (Av. *gərᵊβnā-*, OInd. *gr̥bhṇā-*).

3. Denominative verbs: *aēnaŋha-* 'comit sin against' < *aēnah-* 'sin', *bišaziia-* and *baēšaziia-* 'heal' < *bišaz-* 'doctor', *baēšaza-* 'medicine', *nəma-x̌iia-* 'do homage' < *nəmah-* 'homage', etc.; OP *patiy-avahaya-* 'pray for help in turn'; cf. Av. *auuah-* 'help'.

C. Stems with *ai̯a* added to the root. These stems are typically transitive (a few exceptions).

1. Root with zero grade, including roots in *ā*: Av. *bərᵊjaiia-* 'strengthen(?)', *saδaiia-* 'appear, seem' (< √sand), *zbaiia-* 'invoke' (< √zbā), etc., OP *θadaya-*, *zbaya-*, etc.

2. Root with full grade: Av. *apaiia-* 'reach' (< **āpai̯a-*), *daēsaiia-* 'show', *baṇdaiia-* 'bind', *darᵊzaiia-* 'chain', etc.; OP *°taraya-* 'traverse', *°gaudaya-* 'hide'

3. Root with lengthened grade:
   a. Non-causatives: Av. *dāraiia-* 'hold', etc.; OP *dāraya-*
   b. Causatives, see below

4. Denominatives: Av. *arᵊzaiia-* 'do battle' < *arᵊza-* 'battle'

D. Stems with *-sa-* (OInd. *-ccha-*) added to the root in the zero grade. This is a very common type in Old Iranian.

1. Root with zero grade: Av. *jasa-* 'come' < √gam; *°iiasa-*, OP *°yasa-* 'grab' < *i̯am-*; Av. *tərᵊsa-*, OP *tr̥sa-*, 'fear', etc. Several of these stems have inchoative meaning, that is, 'start becoming something, to become something': *tafsa-* 'become hot', *tərᵊsa-* 'become afraid', etc. In later Iranian this type became a common passive formation.

2. Roots in long *ā*: Av. *yāsa-* 'ask for', OP *xšnāsa-* 'know, *connaître*'

E. Stems with *hiia/šiia* added to the root in the full grade. This is the future tense (see below).

F. Stems in *-aniia-*: *zaraniia-* 'become angry' (cf. OInd. *hr̥ṇiya-*) < *zaran-* 'make angry', *pərᵊsaniia-* 'discuss' (probably secondary after *viiāxmaniia-* 'discuss, debate[?]', denominative of *viiāxman-* 'verbal contest[?]')

G. Vestigial stem formations:
-uua-: Av. *juua-*, OP *jīva-* 'live', Av. *fiiaŋᵛha-* 'hail', *°haⁿruua-* 'guard'; expanded by *-aiia-*: *raēθβaiia-* 'mingle' (with *θβ < θu̯*), *taⁿruuaiia-* 'overcome' (cf. OInd. *tūrva-*, *tūrvaya-*)
-da-: only in **xᵛabda-* 'sleep' in *ni.xᵛabdaiia-* 'put to sleep' and *auua-ŋᵛhabda-* 'go to sleep' < √xᵛap
*-ha-/-ša-: only in *baxša-* 'distribute' < √bag

H. Stem with *n* infix and *a* added to the root of the type C_1V-n-C_2a-:
Some of these are old thematic formations: *kərᵊṇta-* 'cut', *hiṇca-* 'pour', etc.; OP **piⁿθa-* 'inscribe' (if not to be read as *paiθa-*; cf. MPers. *ni-bēs-*).

Others are secondary formations of athematic verbs with *n*-infix: YAv. *mərᵊṇca-* 'destroy' < OAv. *mərᵊ-ṇ-k-*, YAv. *viṇda-* 'find' < OAv. *vi-na-d-*.

I. Stems with reduplication and *a* added to the root:

1. With simple reduplication: Av. *hišta-*, OP *(h)išta-* 'stand' < √stā, Av. *°hiδa-* 'sit' < √had (< IE **sīda-* < **si-zda-* < √sed), *hišmara-* 'memorize, recite' < √hmar

2. With strong reduplication ('intensives'): Av. *ɣžarᵊ.ɣžara-* 'gurgle' < √gžar, *jaɣna-* 'smash to pieces' < √gan

J. Stems with reduplication and *ha/ša* added to the root ('desideratives'): OAv. *dīdraɣža-* 'wish to hold firmly' < √dra(n)g, Av. *zixšnåŋha-* 'wish to know' < √xšnā, *mīmarᵊxša-* 'wish to destroy' < √mark; *susruša-* 'wish to hear' < √srao/sru; *sixša-* 'learn' < **si(š)xša-* (< √sak; cf. *sācaiia-* 'teach'); *diβža-* 'wish to deceive' < **di(d)βža-*[16] < √dab

2.1.4.3. *Derived conjugations*

The future, passive, and causative are part of the verbal system, the future contrasting with other tenses and the passive and causative being part of the intransitive : transitive oppositions.

Future

The future is formed with *hiia/šiia/siia* added to the root in the full grade. There are no forms attested in Old Persian.

Present stem	Future
daδā- 'place, give'	*dāhiia-*
zaiia- 'be born'	*zg̱hiia-*
vana- 'overcome'	*vaṅha-*
vaēδaiia- 'inform'	**vaēsiia-*
naiia- 'lead'	*naēšiia-*
sāuuaiia- 'revitalize'	*saošiia-*
hunauu-/hunu- 'press (the *haoma*)'	*haošiia-*
bauua- 'become'	*būšiia-*
hərᵊza- 'release'	*harᵊšiia-*
mrao- (aor. *vaoca-*) 'say'	*vaxšiia-*

Passive

The passive is formed with the suffix *-i̯a-*, with the root in the zero or full grade: Av. *kiriia-* 'be made', *janiia-* 'be smashed', *bairiia-* 'be carried'; OP *kariya-*, *janiya-*, *θahạya-* 'be announced', *bariya-*, etc. In Avestan, this form normally takes the middle endings, but in Young Avestan and Old Persian active endings are also well attested (Skjærvø 1999b: 187). In Young Avestan, it is sometimes not possible to decide from the manuscript readings whether the original form of a 3rd sg. or pl. is *-ti*, *-ṇti* or *-te*, *-ṇte* (Kellens 1984: 129–30).

16. Actually: **di-db-žʰa-* < **di-dbʰ* + *sa-* < √dabh. In OInd. the group *bž* was replaced by *ps*, e.g., *dipsa-*, restoring the familar suffix *-sa-*, *š* (*ṣ*) being impossible after *p*.

Present stem	Passive	
	YAv.	OP
daēsaiia- 'show'	*disiia-*	
sāuuaiia- 'revitalize'	*sŭiia-*	
kərᵊnauu-/kunau- 'do'	*kiriia-*	*kạriya-*
kərᵊnta- 'cut'	*kərᵊθiia-*	
gạrbāya- OP 'seize'		*gạrbiya-* (*grabiya-?)
daδā- 'place, give'	*daiia-*	
bara- 'carry'	*baⁱriia-*	
xᵛara- 'eat'	*xᵛaⁱriia-*	
jan- 'smash'	*janiia-*	*janiya-*
apaiia- 'reach' (for *āp-*)	*āfiia-*	
vaza- 'convey'	*vaziia-*	
yaza-/yada- 'sacrifice'	*yeziia-*	*yadiya-*

Causative

The causative is formed with the suffix *-aịa-* on the lengthened (or full) grade of the root. In Avestan, a long *ā* may be shortened. The causative is transitive when it corresponds to a passive or intransitive verb. It is factitive ('make somebody do something') when it corresponds to a transitive verb.

Present stem		Causative:
suiia- 'be revitalized'	~	*sǎuuaiia* 'revitalize'
sᵘrunau- 'hear'	~	*srāuuaiia-* 'make heard > recite, sing'
taca- 'run, flow'	~	*tācaiia-* 'make run, flow'
vifiia- 'be buggered'	~	*vaēpaiia-* 'bugger'
dᵊbᵊnao- 'deceive'	~	*dābaiia-* 'make deceive'
hiš.hak-, *haca-* 'follow'	~	*hācaiia-* 'make follow'

2.1.4.4. The aorist

There are four main stem formations of the aorist: (1) the root aorist; (2) the thematic aorists identical with those of the corresponding present conjugations; (3) the *s*-aorist made by adding IIr. **s* (> Ir. *h/š/s*) to the root, which has the long grade in the sg. indicative, elsewhere the full grade; and (4) the reduplicated thematic aorist with zero grade of the root. Some verbs have both root- and *s*-aorist forms (*maŋh-/mạs-* ~ *man-* 'think').

Examples of *s*-aorists: indicative: *mə̄ṇ́hī* < *maŋ-h-i* 'I have thought', *'vạs* < **van-s-t* 'he has won', *stå̄ŋhaṭ* < **stā-h-ṇt* 'they have stood', *xšnāu-š* 'he has favored', *fraší* 'I consulted' < **frać-š-i* (√pars/fras 'ask'); subjunctive: *varəšā* < **varȷ́-š-ā* 'I shall perform', *jə̄ŋghaⁱtī* < **jaŋ-h-* 'he shall come' (√gam); imperative *θrāzdūm* 'protect!'

2.1.4.5. The perfect[17]

The perfect stem is formed by reduplication. The verbs *ād-/āδ-* 'to say' and *vaēd-/vaēδ-* (*vaēθ-*) 'know' lack the reduplication (table 23). The only Old Persian example is *caxr-*, weak stem of **cakằr-* < √kar 'do'.

17. Many perfect forms are found only in the *Frahang ī Ōīm*, a list of Avestan words translated into Pahlavi.

The perfect has a similar distribution of strong and weak stems as the athematic verbs: strong stem in the indicative singular and the subjunctive (some exceptions), weak stem elsewhere (the stem *ād-/āδ-* 'say' is invariable).

The vowel of the reduplicated syllable is usually *a*, *i*, or *u*, in harmony with the vowel of the root, e.g., *ca-kan-* < √kan 'love', *da-δa-* < √dā; *ci-kaēθ-* < √kaēθ/ciθ 'distinguish', *ⁱri-riθ-* < √raēθ/riθ 'pass away'; *ᵘru-raoδ-* < √raod/rud 'weep, howl'; *hušxᵛaf-* (for **hušuuaf-*) < √xᵛap 'sleep'.

Exceptions to this rule include a few verbs whose reduplication syllable has long *ā*: *dā-darˀs-* < √vaēn/dars 'see', *dādr-* (YAv. *daδr-*) < √dar 'hold', *pā-fr-* < √par 'fill', *cā-xr-* < √kar. The stem *bābuu-* < √bao/bu 'become' is probably for **bāuu-* (< **bắβu̯-*), with reintroduction of the *b* of the stem, while *buuāuu-* < **buβāu̯-*.

Roots beginning with *ằ-* have long *ā-* in the perfect: *āp-* < √āp 'reach', *åŋh-* < √ah 'be'; roots beginning with *aē-/i-* have perfect stem in *iiaē-* (commonly spelled *īaē-*, *γaē-*): *iiaē-/īaē-* < √aē 'go', *yaēš-* (for **i̯aēš-*) < √aēš/iš 'seek'.

2.1.4.6. Suppletive stem systems

There are a few suppletive verb systems, e.g., Av. pres. *mrao-*, aor., perf. *vac-* 'say'; Av. pres. *vaēna-*, OP pres. *vaina-*, Av. aor., perf. *darˀs-* 'see', OP impv. *dī-* (cf. MPers. pres. stem *wēn-*, past stem *dīd-*).

2.2. Endings

There are two main types of endings: those of the present and aorist systems, and those of the perfect system. Both these groups are further subdivided into *primary* and *secondary* endings, a classification whose main merit is on the diachronic level. Among the primary endings, there are three sub-groups: those of the present indicative/subjunctive, those of the imperative, and those of the perfect. The subjunctive takes both primary and secondary endings.

The primary endings differ from the secondary endings in various ways, sometimes by additional elements or vowel alternations. Thus, the primary endings of the 2nd and 3rd singular and the 3rd plural active and middle differ from the secondary endings as follows in the present ind. and inj.: primary thematic act. *-i* ~ mid. **-ai* (> *-i̯e*), secondary *-Ø* ~ *-a* in the 2nd and 3rd sg. and 3rd pl.; 2nd sg. *-ahi* ~ *-ō* (< **-ah*), mid. *-aŋ́he* ~ *-aŋha*; 3rd sg. *-aⁱti* ~ *-aṯ*, mid. *-aⁱte* ~ *-ata*; 3rd pl. *-ǝṇti* ~ **-ant* > *-ǝn*, mid. *-ǝṇte* ~ *-ǝṇta*. The 1st sg. active has the endings primary thematic *-ā*, *-āmi* (sbjv. *-ā*, *-āni*) ~ secondary *-ǝm*, the 1st pl. active primary *-āmahi* ~ secondary *-āma*, etc. Among the dual endings note the opposition dual *uu* ~ pl. *m* in the 1st pl.

In Avestan, the 3rd pl. middle has some endings with *r* (*-ⁱre*, *-ṛam*) instead of *nt*; corresponding to 3rd sg. endings without *t* (*-ⁱe*, *-ạm*), cf. perf. act. 3rd sg. *-a* ~ 3rd pl. *-arˀ*. Endings with *-rš* are found in the 3rd pl. opt. act. (*-iiārˀš*) and plupf. act. (*-ǝrˀš* < **-ṛš*). Avestan does not have *r*-endings in the present or aorist (different from OInd.). In the following it is understood that the Old Avestan forms all have long final vowels (*-ā*, *-ē*, *-ǝ̄*, *-ī*, *-ū*).

1st singular active   The primary ending is athematic *-mi*; the thematic ending **-ā* (< IIr. *-ā*, Greek *-ō*) is still found in Avestan (OAv. *-ā*, YAv. *-a*), but *-āmi*, OP *-āmiy* is more common. The subjunctive has *-ā̆* or athematic *-ani*, thematic *-āni*, OP *-aniy*, *-āniy*. There is no 1st pers. imperative. The secondary ending is *-m* after vowel, but *-əm*, OP *-am* after consonant. The primary ending of the perfect is *-ā̆* (< IIr. *-a*).

2nd singular active   The 2nd sg. ending typically contains the consonants *h/š/s* in all forms except the imperative and perfect active. The primary ending is athematic *-hi/-ši/-si*, thematic Av. *-ahi*, OP *-ahạy*, *-ahiy*. The secondary ending is athematic **-h/-š/-s*, thematic **-ah*, Av. *-ō*, OP *-aʰ*.[18] The YAv. 2nd sg. sbjv. form *-āi* for *-āhi*, not infrequently found in late manuscripts, is probably a feature of late, unskilled pronunciation. The thematic active imperative has no ending and so ends in *-a* (OAv., OP *-ā*). The athematic imperative ends in OAv. *-dī*, YAv. *-di/-δi*, OP *-dīy*. The primary ending of the perfect is Av. *-θā̆* (*-tā̆* after *s*).

3rd singular active   The endings of the 3rd sg. active are primary athematic Av. *-ti*, OP *-tiy* and secondary *-t̰*, OP *-Ø*, *-š*, thematic Av. *-aⁱti*, *-at̰*, OP *-atiy*, *-aᵗ*). The OP ending *-š* is most easily explained by a proportion: 2nd sg. *abaraʰ* : 3rd sg. *abaraᵗ* = 2nd sg. *āiš* : 3rd sg. X ⇒ X = *āiš* 'he came' (see Allegri and Panaino 1995). The imperative ending is *-tu*, thematic *-atu*, OP *-tuv*, *-atuv*. The primary ending of the perfect is Av. *-ā̆* (< IIr. *-a*).

1st plural active   The 1st plural active endings are primary *-mahi*, OP *-mahạy*, thematic *-ā̆mahi*, OP *-āmahạy*, secondary *-ma*, thematic *-āma*, OP *-āmā*.

2nd plural active   The 2nd pl. active endings are primary *-θa* (*-tā* after sibilants), thematic *-aθa*, secondary *-ta*, OP *-tā*, thematic Av. *-ata*.

3rd plural active   The endings of the 3rd pl. active are primary **-anti*, OP *-aⁿtiy*, or **-ati* (<-ṇti) and secondary *-n/-ən/-at̰* (< -ṇt), OP *-aⁿ*. On the vowel gradation see above, 2.1.4.1. The endings without *n* are rare in Young Avestan, where the (thematic) full grade is common. The imperative ending is *-əṇtu*. The ending of the perfect is primary *-arə* and secondary *-rəš* for the pluperfect (Jasanoff 1997). The athematic endings of the 3rd pl. optative are *-iiən* or *-iiārəš*, which alternate without any (as yet) known principle of distribution. The YAv. thematic 3rd pl. optative ends in *-aiiən* (*-aēn*), which is identical with the 3rd pl. indicative of *aiia*-stems. In *aiia*-stems the original ending was therefore *-aiiaiiən*, which regularly became *-aiiaēn* (°*darəzaiiaēn* 'they should chain'). In the manuscripts, this ending was most often corrupted to *-aiiĕn* and then replaced by the more familiar *-aiiən*. Similarly the 3rd pl. optative active ended in *-aiiaiiaṇta*, which is occasionally found in the manuscripts, but was usually simplified to *-aiiaṇta*, perhaps as replacement for the expected **-aiiaēṇta*.[19]

18. The final superscripts in Old Persian are etymological indicators, not necessarily phonetic. The following analogy proportion, in fact, suggests strongly that they were not pronounced.

19. See my review (1998) of Kellens (1995).

1st dual active   The endings of the dual (only OAv.) parallel those of the plural, with *uu* instead of *m*: primary *-uuahī*, secondary *-uuā*.

2nd dual active   No examples.

3rd dual active   The primary endings of the 3rd dual active are thematic *-aθō* and *-atō*, which correspond to OInd. 2nd dual *-athaḥ* vs. 3rd dual *-ataḥ*. The secondary ending is Av. *-təm*, thematic *-atəm*, OP *-atam*. The primary ending of the perfect is *-atarᵊ*.

1st singular middle   The ending of the 1st sg. middle is primary **-ai* (OAv. *-ōi*, *-ⁱē*, YAv. *-ⁱe*), OP *-aiy*, secondary *-i*, OP *-iy*; sbjv. *-āi*, *-āne*, OP *-ānaiy*. The optative has the ending *-a* (OAv. *-ā*, YAv. *-a*).

2nd singular middle   The endings of the 2nd sg. middle are primary **-hai/-šai/-sai*, athematic Av. **-he*, *-se*, thematic Av. **-ahe*, OP *-ahaiy*, and secondary **-ha/-ša/-sa*, athematic Av. *-ša*, OP *-šā*, thematic Av. *-aŋha*. There is no ending corresponding to OInd. *-thāḥ*. The imperative ending is *-huua/-šuua/-suua* (*dasuua* < **dad-su̯a*), OP *-šuvā*, thematic Av. *-aŋᵛha*, OP *-ᵃʰuvā*.

3rd singular middle   The ending of the 3rd sg. middle is primary **-tai*, OP *-taiy* (graphically indistinguishable from *-tiy*, both <-t-i-y>), thematic Av. *-aⁱte*, OP *-ataiy*, and secondary *-ta*, OP *-tā*, thematic *-ata*, OP *-atā*. The imperative middle ending is Av. athematic *-tạm*, thematic *-atạm*. There is also a series of archaic Av. athematic endings without *-t-*: pres. **-ai* (YAv. *mruiie* 'is spoken', *niɣne* 'is smashed down'), impv. aor. *-ạm* (OAv. *dạm* 'let it be placed', *ucạm* 'let it be spoken').

1st plural middle   The ending of the 1st pl. middle is OAv. primary **-madai* and secondary *-maⁱdī*. In Young Avestan, *-maⁱδe* (*-maⁱde*) was generalized.

2nd plural middle   The primary ending of the 2nd pl. middle was Ir. **-du̯ai*. In Old Avestan, this developed normally to **-duu̯ⁱē* > *-duiiē*, while in Young Avestan, where intervocalic *d* > *δ*, the *u̯* developed normally > *β*. The YAv. ending must originally have been **-δβe*, but the only example has *-θβe*, with the (sporadic) change of *d* > *θ*. The secondary ending—also imperative—was proto-Iranian **-du̯am*. This developed normally to **-duu̯əm* > OAv. *-dūm*, but YAv. *-δβəm*.

3rd plural middle   The endings of the 3rd pl. middle are primary **-ntai* and secondary **-nta* (postconsonantal zero grade *-aⁱte* and *-ata*). There is also an archaic athematic ending YAv. *-re/-āⁱre* (coupled with 3rd sg. in YAv. *-e*). The imperative ends in athematic pres. *-rạm* (OAv. *jə̄nᵃrạm* 'let them be smashed'), thematic *-əntạm*. The perfect optative has *-irəm* < **-ī-ram* (only YAv. *vaozirəm* 'they would have driven').

1st dual middle   The endings of the dual (only OAv.) parallel those of the plural, with *uu* instead of *m*: secondary *-uuaidī*.

2nd dual middle   No examples.

3rd dual middle   The attested endings of the 3rd dual middle are primary OAv. *-aētē*, YAv. *-ōiθe*, secondary OAv. *-ātəm*, YAv. *-atəm* (*aiia*-stems: *-aiiatəm*). The ending of the perfect is *-ā^ite*.

3rd sg. past passive   The 3rd sg. passive has the ending *-ī̆*: OAv. (aor.) *auuācī*, *vācī* < √vak/vac 'speak, say', *srāuuī* '√srao 'hear'; YAv. pres. *ərᵊnāuuī* < *ərᵊnao-* < √ar 'set in motion', *ja^ini*; perf. *ā^iδi* < √ād 'say, speak'.

2.3. Non-finite forms

The non-finite forms of the verb are the participles, a set of verbal adjectives expressing necessity, and the infinitives.

2.3.1. Present and aorist active participles

The active present participles of the present and aorist stems end in *-ṇt-*, those from the perfect stem end in *-uuah-/-uš-*.

The athematic verbs form the present participle from the weak stem of the root, while participles from thematic verbs have fixed stems in *-aṇt-* (*-əṇt-*).

Participles from athematic verbs have strong stems in *-aṇt-* and weak stems in *-at-* (secondarily *-āt-*) and are declined like adjectives in *-aṇt-*, e.g., *hatō*, gen. sg. of *haṇt-* 'being'. Participles from "Narten" presents have fixed weak stem (OAv. *stauuat-* < **stáu̯ṇt* 'praising', YAv. *mruuat-*).

Examples:

Present   OAv. athematic *həṇt-*, *°iiaṇt-* 'going', *sᵘrunuuaṇt-* 'listening', *stauuat-*; thematic *baodaṇt-* 'being aware(?)', *uxsiiaṇt-* 'growing', *saošiiaṇt-* (fut.) 'he who shall revitalize'; feminine athematic *šiie^itī-* 'dwelling'; thematic *maēka^iṇtī-* 'sparkling'; YAv. athematic *°iiaṇt-*, *haṇt-*, *daδaṇt-/daθaṇt-*, *kərᵊnuuaṇt-*; thematic *baraṇt-*, *būšiiaṇt-* (fut.), *srāuuaiiaṇt-*; feminine athematic *ha^itī-*; thematic *baraṇtī-*, *būšiie^iṇtī-*

Aorist   OAv. root. *daṇt-*, *hanaṇt-* 'gaining'; YAv. *°buuaṇt-*

2.3.2. Perfect active participles

The perfect participle active is formed with the formant *-uuah-/-uš-* from the weak stem with the exception of YAv. *vauuanuuah-* 'having won' and *haŋhanuš-* 'having gained'. The only Old Avestan forms are *vīduuah-/vīduš-* 'knowing', *nąsuuah-* (< *na-ns-*) 'having lost'. The Young Avestan forms *vīδuuah-* and *daδuuah-* must have replaced **vīδβah-* and **daδβah-* under the influence of (?) OAv. *vīduuah-* and **daduuah-*.

In Young Avestan, both stems are attested of the following verbs (note the sound changes):

	strong stem	weak stem
√kaēθ 'distinguish(?)'	cikiθβah-, ciciθβah-	ciciθuš-
√dā 'place, give'	daδuuah-	daθuš-
√u̯id 'find, know'	vīδuuah-	vīθuš-
√u̯ak 'say, speak'	vaoxᵛah-	vaokuš-
√u̯an 'overcome'	vauuanuuah-	vaonuš-
√i̯at 'lign up'	yōiθβah-	yaētuš-
√zā 'leave behind, win'	zazuuah-	zazuš-

Other forms include strong stems: *jaɣnuuah-* < √gan/jan; *taršuuah-* (< **taṯṣuah-*) < √taš 'fashion';—weak stems *åŋhuš-* < √āh 'sit'; *jaɣmuš-* < √gam/jam 'come'; *haŋhanuš-* < √han; *mamnuš-* < √man 'think'; *taṯkuš-* < √tak 'flow'; *vāuuər°zuš-* < √varz 'produce'.

There are two kinds of adjectives related to the perfect participle and with similar function:

1. In -*u*-: OAv. *vīdu-*, YAv. *viθu-* 'knowing', YAv. *zazu-* 'winner' (both only nom. sg.), and YAv. *jiɣāuru-* 'waking' (only acc. sg.)
2. In -*θβan*-: OAv. *ciciθβan-* 'he who has taken notice' (cf. OInd. *cikit-van-*), YAv. *yōiθβan-* 'he who has taken up his position' (both only nom. sg. °*θβā*); note also *fracar°θβå* 'the one walking'

2.3.3. Middle participles

The middle participles of thematic verbs end in Av. -*əmna*-, OP -*amna*-, those of athematic verbs, including the perfect, end in Av. -*ā̆na*-, with the exception of the OAv. pres. *frīnəmna-* 'seeking to win as guest friend(?)' and *s*-aor. *xšnaošəmna-* 'seeking to obtain the favor (of)':[20] YAv. pres. *aojāna*-< √aog 'speak', *ɣnāna-* < √gan/jan, *mruuāna-* < √mrao 'say', *hunuuana-* < √hao 'press (haoma)', *daθāna-* < √dā 'give, place'; *s*-aor. *maŋhāna-* < √man 'think', *mar°xšāna-* < √mark 'destroy'; perf. OAv. *āpana-* < √āp 'reach', *vāuuər°zāna-*, YAv. *apāna-*, *dadrāna-* < √dar 'hold', *haŋhanāna-* < √han 'gain', *ⁱririθāna-* < √raēθ 'die', *mamnāna-* < √man 'think', *pāpər°tāna-* < √part 'fight', *vauuazāna-* < √vaz (mid.) 'fly', *zazarāna-* < √zar 'be angry'.

The stem vowel of the thematic participles undergoes the usual changes in *iia*-stems, after a palatal consonant, and after -*uu*-: YAv. *mainimna-* < *maniia-* 'think'; *daomna-* < *dauua-* 'deceive', *hacimna-* < *haca-* (mid.) 'be followed (by)'; but the 'regular' forms have often been reintroduced in the *iia*-stems (cf. Y 68.21, mss. *jaiδiiamnå*, *jaiδimnå* < *jaiδiia-* 'ask for'). In the *aiia*-stems, only forms in -*aiiamna*- are attested.

2.3.4. Past participles

The past participle (Eng. 'done, killed') has the ending -*ta*-, before which the regular sound changes take place (except *aoxta-* < *aog-* 'speak', with invariable diphthong). The ending is, if possible, added to the zero grade of the root of the verb:
- Roots ending in diphthong/short vowel: *šuta-* 'impelled' < √šu
- Roots ending in long vowels: *dāta-* 'placed, given' < √dā, *stāta-* 'stood' < √stā
- Roots ending in stops: *uxta-* 'spoken' < √vak, *dapta-* 'deceived' < √dab, Av., OP *basta-* 'bound' < √band
- Roots ending in sibilants and *h*: *spašta-* 'seen' < √spas, *varšta-* 'produced' < √varz, *xᵛasta-* 'thrashed' < √xᵛah
- Roots ending in nasals: *mata-* 'thought' < √man
- Roots ending in *r*: *kər°ta-* 'done, made' < √kar, *stər°ta-* 'stunned' < √star, *star°ta-* 'spread out' < √starH

20. See Kellens 1984: 397; Skjærvø 2004.

2.3.5. *Verbal adjectives in* -θa-, -θβa-, *and* -iia-

Avestan has some adjectives derived from verbs which express 'that which should or can be done, what is to be done' (participles of necessity), similar in function to the Latin gerundive.

One group of adjectives has suffixes -θa- (frequently -δa- by internal sandhi; e.g., uxδa- 'to be spoken', θrafδa- 'to be satisfied', friθa- 'to be made friendly') or -θβa- (-tuua- by internal sandhi; e.g., maθβa- vaxᵊδβa- varšt-uua- 'which ought to be thought, spoken produced'); the others have the suffix -iia- (e.g., bərᵊjiia- 'to be strengthened (?)', išiia- 'to be sped (along)', karšiia- 'to be tilled, plowed'), which was also attached to nouns (e.g., yesniia- vahmiia-'worthy of sacrifices and hymns', Yt. 13.153). The formant -θβa- as the "most characterized" seems to have been productive; cf. yašᵊθβa- 'to be sacrificed' for *yaštuua.

From past participles and participles of necessity abstract nouns in -ta-could be made: yesniiata- vahmiiata- xšnaoθβata- frasastata- 'sacrifice-worthiness, hymning-worthiness, satisfaction-worthiness, glorification-worthiness' (Yt. 8.50).

There is a similar, moderately productive suffix -tuant-: stərᵊθβaṇt-'(weapon) containing = causing paralysis', fracarᵊθβaṇt- 'going forth' (nom. sg. fracarᵊθβå, Y 62.8), vīuuərᵊzduuaṇt- 'seeking to bloat (one's possessions?)' (gen. sg. vīvərᵊzduuatō, Y 9.30).

2.3.6. *Infinitives*

Infinitives may be formed from the root or the present stem. There are two sets of infinitives: those ending in OAv. -diiāi/YAv. -δiiāi, which have medial function, and the others, which are neutral with respect to voice.

The middle infinitives in -diiāi can be made from the present stem: OAv. athematic jaⁱdiiāi 'to be smashed', nī.məraždiiāi 'to be wiped out', mərᵊ̄ŋg-diiāi 'to be destroyed'; thematic diβžaⁱdiiāi 'to be deceived', vərᵊziieⁱdiiāi 'to be produced', θrāiiō.diiāi 'to be protected'; YAv. athematic dazdiiāi 'to be placed/given'; frā.vərᵊṇdiiāi 'to be chosen'; thematic vazaⁱδiiāi 'to be conveyed';—or from the aorist stem: athematic OAv. uzərᵃⁱdiiāi 'to rise up', dərᵃⁱdiiāi 'to be (up)held'.

The neutral (active/middle) infinitives in Old Avestan comprise a large number of formations that are formally similar to dative singular forms: *-ai (pōi 'to protect'), *-u̯ai (dāuuōi 'to give', vīduiiē 'to know'), *-tai (gaṭ.tōi 'to come', stōi 'to be', itē 'to go', sastē 'to announce'), *-manai (xšᵊ̄nmaⁱnē 'to[?]') *-u̯anai (vīduuanōi 'to know', uruuānē < *r̥-u̯anai[?] 'to *obtain'), *-ahai (frādaŋ́hē 'to further', srāuuaiiaŋ́hē 'to make heard').

The Young Avestan neutral infinitive is identical with the dative of an action noun in -ti, with the ending -tᵊ̄e, -taiiaē°, e.g.: uxtᵊ̄e 'to speak', varštᵊ̄e 'to perform', paⁱtištātaiiaē° 'to withstand'. It is sometimes not clear whether we have an infinitive or an action noun in -ti.[21]

The verb ah- has the infinitive stᵊ̄e 'to be'. Old Persian has an infinitive in -tanaiy made from the root in the full grade: kaⁿtanaiy, bartanaiy, car-tanaiy (< √kar).

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21. Note that the instrumental of such nouns is very common, e.g., uxti 'by saying'.

2.4. Verbal prefixes (preverbs)

The preverbs are the common Indo-Iranian ones. In Avestan, but not in Old Persian, the preverbs may be detached from the main verb, usually preceding it, sometimes fronted to the beginning of the clause, sometimes separated by one word only; they may also be lowered to the end of the clause (or metrical half-line). In Old Avestan, they are often repeated directly before the verb, but without counting metrically. They are also separated from the verb by the conjunction *-ca*. When a verb with preverb is repeated, only the preverb may be repeated. In Young Avestan, a verb can, apparently, have two preverbs, e.g., *pa^iti.auua.jasa-* ' to come down hither'.

Old Avestan examples:

hiiat̰ tā hə̄m maniiū jasaētəm (< *ham.jasa-*) 'when those two inspirations come together' (Y 30.4)

vərəziiō.tūcā it̰ ahmāi fracā vātōiiō.tū it̰ (< *fra.vātaiia-*) 'Let him (or her) both keep producing it for this one and keep making it known!' (Y 35.6)

hātąm huuō aojištō yahmāi zauuə̄ng jimā *kərəduš ā (< *ā.jam-*) '*He* is strongest of (all) beings for whom I come to (his) calls (even if they are) weak(?)' (Y 29.3)

apānō darəgō.jiiāitīm ā xšaθrəm vaŋhə̄uš manaŋhō (< *ā-ap-*) 'having obtained long life, having (obtained) the command of good thought' (Y 33.5)

ā mā [ā] idūm vahištā ā xᵛaiθiiācā mazdā darəšatcā (< *ā.yā-*) 'Ask *me* for my best (utterances), O Mazdā (and you others), (ask me) for (utterances) both having(?) their own (command?) and (uttered) strongly' (Y 33.7).

Young Avestan examples:

huuarštå ma̧θrå pairica dadəmahī āca vaēδaiiamahī 'the well-wrought thought poems we place all around and make them known' (Y 4.1)

ā mąm yāsaⁿ^ᵛha spitama frā mąm hunuuaⁿ^ᵛha xᵛarətə̄e aoi mąm staomaine stūiδi 'Ask me hither, Spitamid! Press me forth to drink! Praise me for strength!' (Y 9.2)

us gə̄uš stuiiē tāiiāat̰cā hazaŋhat̰cā us mazdaiiasnanąm vīsąm *ziiānaiiat̰cā vīuuāpat̰cā 'By my praise I remove myself(?) from theft and violence to the cow, (by my praise I remove myself?) from damage and devastation of the houses of Mazdaiiasnians' (Y 12.2)

nī tē zāire maδəm mruiiē nī aməm nī vərəθraɣnəm 'I call down, O tawny one, your intoxication, (I call) down your might and your obstruction-smashing power' (Y 9.17)

āca nica mrūmaide 'we call hither and down to us' (Y 68.21)

3. Nominal system

There are no articles.

3.1. Inflection

3.1.1. Gender

Nouns, adjectives, and pronouns have three genders: masculine, feminine, or neuter. The distribution of the genders is by and large that of Indo-Iranian, with some individual Iranian features (*vak-/vac-* is feminine in Old

Indic, masculine in Avestan; neuter *a*-stems often become feminine in the plural in Young Avestan, etc.). Especially in poorly transmitted Young Avestan texts, gender is sometimes confused, e.g., *aētaṯ druxš/nasu* 'this demon of deception/death' for *aēša druxš/nasuš* or *aētạm drujim/ nasāum* (V. 9.45, etc.). This type of mistake may have originated in abbreviated text, e.g., *aēt° dr°/nas°*.

Feminine forms of adjectives of the *a*-declension are declined according to the *ā*-, occasionally the *ī*-declension (e.g., Av. *sūra*- ~ fem. *sūrā*- 'filled with life-giving strength'; OP *tigra*- ~ *tigrā*- 'pointed', but Av. *zarənaēna*-, fem. *zarənaēʰnī*- 'of gold', *maniiauua*-, fem. *maniiəuuī*- 'in the world of thought', OP *aθangaina*- ~ *aθangainī*- 'of stone').

The feminine forms of *u*-stems and consonant stems are declined according to the *ī*-declension (YAv. *vaŋhu*- ~ fem. *vaŋʷhī*- 'good'; *poᵘru*- ~ fem. *paoʰrī*- 'much, many' (< *pṛH-u-, *pṛHṵ-ī-); *driɣu*- ~ fem. *driuuī*- 'poor'; *apāṇk*- ~ *apašī*- 'backward-turning'; *bərəzaṇt*- ~ *bərəzaʰtī*- 'lofty', *amauuaṇt*- ~ *amauuaʰtī*- 'powerful', *gaomaṇt*- ~ *gaomaʰtī*- 'with milk'; *ašā̆uuan*- ~ *ašaonī*-/*ašāunī*- 'sustainer of Order' (beside the irregular form *ašāuuaʰrī*- Y 58.4); °*manah*- ~ °*manahī*- 'having . . . thought'; comparative *maziiah*- ~ *maziiehī*- 'greater'; perf. ptc. *daδuuah*- ~ *daδušī*- 'having put in place, creator'; pres. ptc. athematic -*aʰtī*-, thematic -*əṇtī*- (-*iṇtī*-, -*aʰṇtī*-, -*uuaʰṇtī*-, -*iieʰṇtī*-): *vanaṇt*- ~ *vanaʰṇtī*- 'winning'; OP **yaudaⁿtī*- 'being in turmoil' (restored).

Feminine forms of *i*-stem adjectives are declined as feminine *i*-stems (e.g., masc., fem. *āhuʰri*-, *māzdaiiasni*-).

Compounds with °*tanū*- 'body' and °*bāzu*- 'arm' are declined as *ū*-stems (fem. acc. pl. *sraotanuuō* 'having sinuous (?) bodies', gen. sg. *auruša.bāzuuō* 'having white arms').

Neuter adjectives are declined like neuter nouns (e.g., nom.-acc. sg. Av. *sūrəm*, OP *frašam* 'perfect', Av. *āhuʰri* 'belonging to Ahura (Mazdā)', *vohu*, OP *paruv* 'much').

Pronouns have the special masculine ~ feminine morphemes -*hm*- ~ -*hi̧*-: Av. dat. masc. *a-hm-āi* 'him', OP *a-ʰm-ataʰ* 'from there', fem. gen. OAv. *a-x́ii-å*, YAv. *a-ŋ́h-å*, OP *a-ha̧y-āyāʰ*.

In Old Avestan, there are also remnants of a pronominal nom. fem. in **-ai* (cf. Latin *quae*), e.g., *xᵛə̄ uruuā xᵛaēcā . . . daēnā* 'his own breath-soul, his own vision-soul'.

The numerals 3 and 4 have inherited feminine forms with a morpheme -*hr*-/-*šr*-: Av. nom. masc. *θrāiiō* ~ fem. *tišrō*, *caθβārō* ~ fem. *cataŋrō*.

3.1.2. Number and case

There are three numbers: singular, dual, plural. Few dual forms are found, but they suffice to show that this category was basically of the old Indo-Iranian type.

Proto-Iranian had eight cases: nominative, vocative, accusative, genitive, dative, ablative, instrumental, locative, all of which are preserved in Avestan, while Old Persian has only six, with the genitive being also used for the dative and the ablative having merged with the instrumental.

Case syncretism is common: voc. ≠ nom. only in the sg.; nom. = acc. in the fem. and neut. pl.; nom. = acc. in the neuter singular, dual, and plural; dat. = abl. in the pl.; dat. = abl. = ins. in the dual; in Old Persian (and Young Avestan?) gen. = loc. in the dual (Old Avestan distinguishes four cases in the dual).

3.2. Stem systems

Depending on stems and endings, nouns and adjectives are classified in various declensions. Vowel stems have a vowel before the ending: *a* ("the-matic"), *ā, i, ī, u, ū*. The *i*- and *u*-stems have ablauting stem formants (*-i-/-ai-, -u-/-au-*). Consonant stems have a consonant before the ending, most commonly *n, r, h*, but also *p, t, ṇt, d*, etc. Many consonant stems have ablauting stem formants. The masculine long vowel stems from laryngeal stems (*-ā- < -aH-, -ī- < -iH-, -ū- < -uH-*) are declined as consonant stems. The "diphthong" (*aē-, ao-*) stems behave partly as vowel stems, partly as consonant stems.

3.2.1. Nominal stems ending in vowels

a-stems

The majority of Avestan vocalic stems are *a*- and *ā*-stems (see below), while other types are relatively rare. In proto-Iranian and Old Avestan the masculine *a*-stems were the only ones to have a full set of different endings in the singular (in all other declensions gen. = abl.). The *a*-declension also has a special gen. sg. ending, *-ahi̯a*; all other declensions have *-h/-š*. In the dat.-abl. and loc. pl., the thematic vowel is replaced by the diphthong *-ai-* (> Av. *aē, ōi*).

i- and u-stems

The *i*- and *u*-stems fall into two/three categories, according to their ablaut patterns, of which there are three main ones:

On one hand we distinguish between so-called protero- and hystero-kinetic variants of the gen. and dat. singular endings. In the protero-kinetic variant the stem formant takes the full grade in the gen. (ending -*š*) and dat. singular; in the hysterokinetic one it takes the zero grade (gen. ending is *-ah*). The dat. ending is *-ai* in both variants.

On the other hand, we distinguish between *i*- and *u*-stems which take the lengthened grade of the stem formant in the strong cases and those that do not. Here the former group is categorized as diphthong stems (see below).

All *i*- and *u*-stems typically take the full grade of the stem formant in the loc. singular and nom. plural. The *u*-stem *pasu-* 'sheep' has the hystero-kinetic YAv. nom. pl. *pasuuō*.

Two special *i*-stems are Av. *vi-* 'bird', nom. pl. *vaii̯ō*, gen. pl. *vaii̯ąm*, and the hysterokinetic Av. *ra'i-* 'wealth', in which the original laryngeal produced an "ablauting" pattern *raē-* < *raHi-* (acc. sg. *raēm*, pl. *raēš*) ~ *rāii-* < *raHi̯-* (YAv. gen. sg. = OAv. nom. pl. *rāii̯ō*; YAv. ins. sg. *raii̯a*, gen. pl. *raii̯ąm* with *aii < āii*). The feminine Av. *ja'ni-* 'woman', according to the

manuscripts, has YAv. gen. *janiiaoš* or *janiiōiš*[22] (cf. OInd. *patyuḥ*, gen. of *pati-* 'master'?).

A small set of neuter *u*-stems have ambi-/holokinetic ablaut: either full/lengthened grade of the root and zero grade of the stem formant in the nom.-acc. (*āiiu* 'time/life-span', *dāuru* 'wood', *zānu* 'knee'), zero grade of the root and full grade of the stem formant with proterokinetic inflection (only dat. sg.: *yauue/yaoe*; loc. sg. *drao°*), or zero grade of both root and stem formant (dat.-abl. pl.: YAv. *žnubiias°*; in compounds: OAv. *darᵊgāiiu-* 'bestowing long life' < *darga-Hi̯u-*, YAv. *darši.dru-* 'carrying a defiant mace', YAv. *fra-šnu-* 'knob-kneed(?)' for °*xšnu-*?).

aē- and *ao-*stems

There are two types of diphthong stems: monosyllabic and polysyllabic. Polysyllabic diphthong stems are those *i-* and *u*-stems that have forms with full or long grade of the suffixes: Av. *-i-/-aē-/-āi-*, and Av. *-u-/-ao-/-āu(u)-*, OP *-u-/-āu-/-āv-*. Here these will be called *aē-* and *ao-/au*-stems.

The Avestan *aē-*stems include *haxaē-* 'companion, friend', *kauuaē-* 'poet-priest', *xštauuaē-*, a legendary people, *sāuuaŋhaē-*, a calendrical *ratu*.

The city name YAv. *raγā-* (nom. *raγa*, acc. *raγam*; OP ins.-abl. *ragāyā*) apparently has suppletive weak stem *raji-* (abl. *rajōit̰*).

The *ao-/au*-stems include the Avestan monosyllabic stem *gao-* m., f. 'cow, bull', the masculine noun *bāzao-* 'arm', masculine adjectives in °*bāzao-* and °*fšao-* 'cattle', and the feminine nouns Av. *daŋhao-*, OP *dahạyau-* 'land', Av. *nasao-* 'carcass, demon of dead bodies', and *pᵊrᵊsao-* 'rib'. The monosyllabic *gao-* and the adjectives in °*bāzao-* have long grade in the nom. singular. They all have long or full grade in the nom.-acc. plural.

ā- and *ī-*stems

The feminine *ā*-stems have no ending in the nom. singular, like the *ī*-stems, which to some extent appear to have influenced the *ā*-stems. Thus, *ā*-stems add an element *-āi̯-*: Av. *-aii-*, OP *-āy-*, before the ending in the gen., abl., dat., ins. (optional), loc. sg., which makes the *ā*-stems largely parallel with the *ī*-stems (e.g., gen. *-āyāh ~ *-īyāh: Av. *daēn-aii-āh, OP *taum-āy-āh < taumā-* 'family'; Av. *nā'r-ii-āh < nā'rī-* 'wife, woman', OP *bāxtr-ĭy-āh < bāxtrī-* 'Bactria'), and the voc. sg. of *ā*-stems adds *-i*, the ending of the *ī*-stems (e.g., Av. *daēne* < *-ai*, cf. *vaŋᵛh-i*).

The feminine *ī*-stems fall into two categories, commonly referred to as the "*devī-*" and "*vr̥kī*-declensions." Of the two, the *devī*-declension is largely parallel with the *ā*-stems, with an ablauting stem formant: *-ī-/-yā-*. Most Av. *ī*-stems belong to this declension. On the "*vr̥kī*-declension" see below on laryngeal stems.

In Old Persian, the *p*-stem *āp-* 'water' and the *h*-stem *māh-* 'month' appear to have been transferred to the *ī*-stems: *āpī-*, *māhī-*. The consonant stem *uš-* 'senses(?)', usually in the dual *ušī-*, appears to have a nom. sg. *ušĭyā* beside *ušiy* (dual?).

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22. See the discussion by Pirart 1993, whose conclusions I do not necessarily endorse.

ū-stems
See below on laryngeal stems in 3.2.2.

3.2.2. Nominal stems ending in consonants

Consonantal noun and adjective stems can end in any consonant except the fricatives, affricates, and glides.

Stems in labial stops

The only stems in labial stops are two feminine root nouns in *p*: Av., OP *āp-/ap-*, Av. *kərᵊp-/kəhrp-* 'body, form'. Of the two, *āp-/ap-* has normal ablaut, while *kərᵊp-* has the strong stem *kəhrp-*. The labial becomes *f* before the nom. *-š*; no loc. plural forms are attested. Before endings with *b*, the labial was assimilated, as in the OP ins.-abl. pl. *abiš* 'with waters' with *b < bb < p-b* and the YAv. dat.-abl. pl. *aⁱβiiō* 'for the waters' with *β < b*.

Stems in dental stops (d, t, ṇt)

Stems in *d* include a few nouns (OAv. *išud-* 'due, debt', YAv. *pāδ-/paδ-* 'foot', OP *θar(a)d-* 'year').

Stems in *t* include:

• Root-nouns in *t* from verbal roots ending in a vowel (Av. *°bərᵊt-* 'carrying, riding', *°xšnut-* 'satisfying') and the neuter *ast-* 'bone'

• Feminine *tāt-*stems (e.g., *hauruuatāt-* 'wholeness', *kahrkatāt-* 'the term 'vulture')

• The *āt-*stems *fraptərᵊjāt-* 'winged' and *rauuascarāt-* 'roaming the open spaces', with nom.-acc. pl. neut. *fraptərᵊjan* and *rauuascaraṇ* (Yt. 8.48)

• The word for 'grandchild', with a suppletive paradigm Av. (OP) *napāh-* (nom., voc. sg.), *napāt-* (acc. sg.), *napt-* (loc. pl. *nafšū*; fem. *naptī-*, deriv. *naptiia-*), *naptār-* (acc. sg.), *nafᵊδr-* (acc., gen. sg.)

Stems in *ṇt* include adjectives in Av. *-aṇt-*, *-uuaṇt-* (OP *-uvant-*), and *-maṇt-*, and active present and aorist participles in *-aṇt-*. The stem formants Av. *-uuaṇt-* and *-maṇt-* are in complementary distribution: *-maṇt-* is used after stems in *u* or *ao* and *-uuaṇt-* elsewhere. Av. *mazāṇt-* is probably an old *Hant*-stem. The *nt*-stems have the most complex stem systems, with as many as three stems. The adjectives have strong stem *-(uu/m)aṇt-*, weak stem *-(uu/m)at-*, plus a stem in *-(uu/m)ah-* for the nom. (beside *-ant-*) and voc. singular. Participles of athematic verbs have strong stem in *-aṇt-*, weak stem in *-at-*, but those of thematic verbs have *-aṇt-* throughout; both have YAv. nom. sg. masc. in *-ō*. Adjectives in *-uuaṇt-* made from *h*-stems combine *-a(ŋ)h* and *uua- > -aŋᵛh-* (except OAv. fem. *nəmaxᵛaⁱtī-* 'containing homage' and the YAv. name *haraxᵛaⁱtī-* 'Arachosia', OP *haraʰuvatī*). In the strong forms, *-aŋᵛhaṇt-* regularly became *-aŋhuṇt-*, which the scribes frequently replaced with *-aŋᵛhaṇt-*.

The final *t* of these stems was assimilated to *d* before endings with *b* (OAv. *azdᵊbīš*, *°bərᵊdᵘbiiō*, *drəguuō.dᵊbīš < drəguuaṇt-* 'filled with deception', etc.), which in Young Avestan was replaced by *ț* (*ẏžāraiiaț.biiō*). The *t* was lost, by assimilation and simplification, before *s* in the nom. sg. and loc. pl. (OAv. *haᵘruuatās*, YAv. *°bərᵊs*, OAv. *drəguuasū*). The neuter root noun Av. *ast-* 'bone' has nom.-acc. pl. (or sg.?) *as°* in OAv. *ascā*. Thematic forms are

common, e.g., Av. *saošiiaṇtaē̆ᵇiiō* < *saošiiaṇt-* 'revitalizer', OP *tunuvaⁿtahaẏā* < *tunuvant-* 'powerful'. Athematic stem forms of thematic verbs may also occur: YAv. *ẏžāraiiaṭ.biiō* < *ẏžāraiiaṇt-* 'overflowing(?)', *xšaiiatō* < *xšaiiaṇt-* 'being in command', but these may have lost their *n* late in the manuscript tradition.[23]

Stems in velar stops.

Stems in velar stops (only Av.) comprise a few root nouns (*drug-* 'deception', *vak-* 'word, speech') and the adjectives in *-ṇk-* (mostly denoting direction: *frāṇk-* 'forward', etc.). The root nouns with vowel *a* have normal ablaut. The velar becomes *-x-* before the nom. *-š*; no loc. pl. forms are attested. Before endings with *b*, the velar should have been assimilated to *-γb-* (*-γβ-*?), but this sound combination is not found at all in Avestan. Instead we have forms apparently built on the nom. sg.: dat. abl. *vāγžᵇbiiō*, ins. **vāγžibiš* (only *vaγžᵇbiš* Fragment *Nirangistan* twice), with "combined" *i*-epenthesis and anaptyxis (*-γžbii-* > **-γžᵊbii-* > *-γžᵇbii-*).

The *nk*-stems originally had a suffix *-Hǎ̆nk-/-Hǎ̆nc-/-Hṇk-/-Hṇc-*, which, combined with preceding *a* or *i* produced ablauting suffixes *-ānk-/-ānc-/-āk-/-āc-* (*-ac-*), *-iᵊǎ̆nk-/-iᵊǎ̆nc-/-īk-/-īc-*. The stop itself only appears in the neut. nom.-acc. sg., which ends in *-āgᵊṭ* (it has been suggested that this may not be directly from **-ākt*, but a way of writing final *-āk* with a non-released final *-k*, like the final *-ṭ*).[24]

Stems in n

Stems in nasals comprise stems in *n* (common) and *m* (rare).

The *n*-stems includes several subsets: root nouns, *u̯an-* and *man*-stems, which are in complementary distribution (*m* after *u̯*), *Han*-stems, *i̯an*-stems, and *in*-stems. All these, except the *in*-stems, show ablaut in the stem formant: *ān/an/n/a* (< *ṇ*), *uu̯ān/uu̯an/un/uu̯a*, *mān/man/mn/ma*.

The zero grade *un* of the Av. *uu̯an*-stems combines with a preceding *a* > *aon* and a preceding *u* > *un* (*u̯uu̯an-/yun-*). Because of the morphophonological vagaries of *u̯*, the *u̯an*-stems are sometimes no longer recognizable as such, e.g., Av. *span-/spa-/sǔn-* 'dog' (< **ću̯an-/ćuṇ-/ćun-*; *ᵘruθβan-* 'entrails' < **ruθu̯an-*; *aδβan-* 'road' < **adʰu̯an-*). Av. *aθaru̯an-* 'priest' has strong stem *āθrauu̯an-*, weak stem *aθaᵘrun-*. Some *u̯an*-stems have voc. sg. forms in *-um* (*-ᵊm*), with the final *-n* apparently assimilated to the preceding labial *u̯(ᵊ)*, e.g., *ašāum* < *ašauu̯an-* 'sustainer of order', *yum* < *yuu̯an-* 'a youth'.

The masculine adjective Av. *θri.zafan-* 'with three mouths' has nom. sg. *θri.zafå*, and short *a* in the acc. like *vᵊrᵊθrajå*, *°janᵊm* 'obstruction smasher', but the word is probably a *uu̯an*-stem **θri.zafu̯an-*, hence its voc. sg. *θri.zafᵊm* (for *°zafum*?).

There are a few *Han*-stems, among them *maθrān-* 'poet' < **manθra-Han-* and, possibly, *marᵊtān-/marᵊθn-* if < **marta-Han-/martaHn-/martHn-* 'mortal'.

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23. Instead of *ṇt* (ﻮﻊ), many mss. write *nt* (ﻮﻝ), in which the *n* is more exposed to being lost.

24. Note that it is often difficult to determine whether forms such as *parāca*, *fraca*, *vica*, *tarasca* are from the *nk*-stems or contain *-ca* 'and'.

There is one masculine Av. *iian*-stem (the proper name *fraŋrasiian-*), and a small number of feminine ones (*kaniian-* 'young woman', *kaxᵛarᵊⁱδiian-*, kind of female sorcerer, and *kāiiaδiian-/kaiieⁱδiian-*, kind of female sorcerer). The feminine **iian*-stems have various forms from stems in *-iiā-* (nom. *kaⁱne*), *-ī-* (gen. sg. *kaniiå*, *kaxᵛarᵊⁱδiiås°*, *kāⁱδiiås°*, acc. pl. *kaniiō*), or *-ĭn-* (voc. sg. *kaxᵛarᵊδaⁱne < °δiⁱne*(?), acc. sg. *kaⁱnīnəm*, gen. sg./nom. pl. *kaⁱnīnō*). The gen. pl. forms in *-inạm* are from *ī-* or *ĭn-*-stems.

There are a few Av. *in*-stems (Av. *fraxšnin-* 'having foreknowledge', YAv. *parᵊnin-* 'winged', etc.).

The heteroclitic neuter *r/n*-stems have *r*-stem nom.-acc. sg. and *r-* or *n*-stem nom.-acc. pl., e.g., *aiiarᵊ* 'day', gen. sg. *aiiạ* (< *-aŋh*), nom.-acc. pl. OAv. *aiiārᵊ*, YAv. *aiiạn*; OP **vazar*, ins.-abl. *vašnā*.

Stems in m

There are a few *m*-stems (only Av.): the archaic and irregular *zam-* 'earth' and *ziiam-* 'winter', which form the nom. and acc. sg. as *ā*-stems, and the other cases from full grades (the disyllabic loc. sg. *zəmi*) or zero grades *zᵊm-* and *zim-* (note ins. sg. *zᵊmā* with the long *-ā* of monosyllables); the semantically related *ham-* 'summer' (FO 25b loc. sg. *hama* for **hami*); and *dam-* 'house' (OAv. gen. sg. *dᵊṇg°*, OYAv. loc. sg. *dạm*, YAv. *dạmi*). By regular sound developments, both *zam-* and *ham-* should have had weak stems **sm-*; cf. *upasma-* '(living) in the earth'. Whether OP *uzmayāpatiy* (*kar-*) 'impale' contains *zam-* is uncertain.

Stems in h

The *h*-stems (*ah*-stems) comprise several common neuter nouns (*manah-* 'thought', etc.), including stems with laryngeals (*dāh-* 'gift' < **daʾah-*), and a few masculine nouns and adjectives. Most of the masculine forms are in compounds with neuter *h*-stems (*humanah-* 'having good thoughts', etc.).

The *h*-stems also include some root nouns, active perfect participles (only Av.) in *-uuah-* (strong stem *-uuåŋh-*, middle stem *-uuah-*, weak stem *-uš-*), and comparatives in Av. *-iiah-*, OP *-ĭyah-* (strong stem Av. *-iiāh-*, OP *-ĭyāh-*, weak stem Av. *-iiah-*).

Stems in sibilants

Stems in sibilants include stems in *s*, *z*, and *š*. The *s-* and *z*-stems are original stems in IIr. **ć*, *j́* (IE *k̂*, *ĝ*), while the *š*-stems are IIr. *s*-stems with *š* by ruki. The *s* and *z* are assimilated to the nom. sg. *-š* (OAv. *maš < maz-* 'great', YAv. *spaš < spas-* 'spy', *barš < barz-* 'high'). The sibilants are assimilated to *ž* before endings with *b* (Av. *vižⁱbiiō < vis-* 'town'; *snaⁱθižbiia < snaⁱθiš-* 'weapon').

Stems in laryngeals

Laryngeal stems end in vowel plus laryngeal (**aH > ā*, **iH > ī*, **uH > ū*). The laryngeal **iH-/ī*-stems are represented in Avestan and Old Persian by feminine forms of adjectives in Av. *-aēna-*, OP *-aina-*: Av. *-aēnī-*, OP *-ainī-* and Av. female patronymics in *-fᵊδrī-* 'whose father (is)'.

The *ū*-stems are represented by OAv. *fsᵊratū-* '?' and OYAv., OP fem. *tanū-* 'body' (on Av. *hizū-* 'tongue', see below).

Typically these stems add the nominative singular endings directly to the stem: nom. *°dₐ̆H-s* 'giver, placer' > Ir. *°dāh* > Av. *maz-då* 'he who places (all things) in his mind, all-knowing', OP °*maz-dāʰ*; *jiH-š* 'living', *suH-š* 'giving life-giving strength' > Av. *jiš, suš*; Av., OP *tanŭš* 'body'.

Before endings in vowels, the laryngeal was lost with hiatus (or inserted glide) in Old Avestan, but contraction in Young Avestan and Old Persian: acc. sg. *mazdaH-am* > Av. *mazdə̄m* (trisyllabic), OP °*mazdām*; *°jiH-am*, *°suH-am* > *°jiᵢ-am*, *°suᵤ-am* > YAv. °*jīm*, °*sŭm*; gen. sg. *mazdaH-as* > *mazda'ah*, OAv. *mazdå* (trisyllabic) > YAv. *mazdå* (disyllabic) (OP remade into °*mazdāhaʰ*); nom.-acc. pl. *°jiH-as/-n̥s*, *°suH-ah/-n̥s* > *°ji'ah*, *°su'ah* > OAv. °*jiiō*, °*suuō*; nom.-acc. dual *priH-ā* > *friia* 'dear'.

The masculine *ā*-stem Av. *paṇtā-* 'road' < *pantaH-* is characterized by holokinetic ablaut. In addition, when the laryngeal came directly after the *t* of the stem and before the vowel of an ending, the *t* became Ir. *θ*: nom. sg. *pantāH-s* > *pantāh* > *paṇtå*, acc. sg. *pantāH-m* > *paṇtə̄m*, gen. sg./acc. pl. *pn̥tH-as* > *paθah* > *paθō*. In Old Persian, the word presumably became a feminine *ī*-stem (acc. sg. *paθīm*).

Av. masc. *hizuuā-/hizū-* 'tongue' has nom.(?) and acc. from the strong stem: Av. acc. *hizuuə̄m*; other forms from the weak stem; the ins. is YAv. *hizuuō* (with labialization of *-ᵤa > -ᵤō*). In compounds we find *hizuuå*: OAv. *hizuuå.uxδa-* (= nom.?), etc. In Old Persian, this noun became an *n*-stem: acc. *hₐzānam*.

OP ā-stems

Old Persian has three masculine *ā*-stems: *aʰuramazdā-*, *xšayaₐršā-* (or *xšayāršā-*) 'Xerxes', and *ₐrtaxšaçā-* 'Artaxerxes'. Of these three, *xšayaₐršā-* was originally an *n*-stem, *xšayaₐršan-*, and *ₐrtaxšaçā-* probably an *a*-stem.

r-stems

Among the *r*-stems, the root-nouns (OAv. *gar-* 'song', *sar-* 'union'), words denoting kinship (OAv. *p^(i/a)tar-*, YAv. *pitar-*, 'father', *mātar-* 'mother', OAv. *dugᵊdar-*/YAv. *duɣdar-* 'daughter', *xᵛaŋhar-* 'sister', *brātar-* 'brother', *naptar-* 'grandson'), and *nar-* 'man, hero' have full grade in strong cases, while agent nouns in *-tar-* (e.g., *pātar-* 'protector', *dātar-* 'maker, creator') and *star-* 'star' have lengthened grade.

The *r*-stems behave partly like vocalic and partly like consonantal stems. Like vocalic stems they have *-nš* in the acc. pl. (e.g., *nərᵊš*), but like consonantal stems they form their nom. singular by lengthening the final syllable and dropping the final *r*, e.g., *dātr̥-*: nom. *dātā* > YAv. *dāta*. Like *i-*, *u-*, and *n*-stems, they have both protero- and hysterokinetic gen. singular forms (e.g., YAv. gen. *narš*, but *piθrō*, dat. *fᵊδrōi*).

There are a few neuter *r*-stems (*aodar-* 'cold': OAv. gen. sg. *aodərᵊš* and YAv. ins. sg. *aodra* [*Herbedistan* 17.3]; YAv. *vadar-* 'weapon': nom.-acc. sg. *vadarᵊ* (< *ᵤadr̥*), YAv. *vaŋhar-* 'spring': loc. sg. *vaŋri* FO 8). On neuter *r/n*-stems, see above on *n*-stems.

The word *ātar-* 'fire' was probably originally a neuter *r*-stem, with nom.-acc. sg. **āt̰r̥-*. When it became a masculine noun, the endings were simply added onto this form: **āt̰r̥-š*, **āt̰r-am*, which produced the nom. *ātarš* and acc. *ātrə̄m* (Hoffmann 1988: 58).

3.2.3. Suppletive stem systems

There are several suppletive stem systems, of various kinds:

1. Alternating vowel and consonant stems: Av. *zā-/zam-* 'earth', *ziiā-/ziiam-* 'winter' (see above); OAv. *sauua-* (sg. loc. pl. nom.-acc., ins.), *sauuah-* (sg. nom., ins., gen., pl. gen.) 'life-giving strength', *ušā-/ušah-* 'dawn': sg. nom. OYAv. *ušå*, YAv. sg. acc. *ušạm*, *ušåŋhəm*, abl. *ušaiiāt̰*, pl. loc. *ušahuua*; YAv. *kaniiā-/kaⁱnīn-* 'young woman': sg. nom. *kaⁱne < *kani̯ā*, acc. *kaniiạm*, *kaⁱnĭnəm*, gen. *kaniiå*, *kaⁱnĭnō*, pl. nom. *kaⁱnĭnō*, acc. *kaniiō*, dat.-abl. *kaⁱnibiiō*; OP *āpī-*(?)/*ắp-* 'water'

2. Alternating consonant stems: neuter *r/n*-stems (see above); °*carat-* 'walking': nom.-acc. pl. °*carạn*; *napah-/napat-/naptar-* 'grandson': sg. nom. YAv. *napå*, OP *napā* (< *-āh*), YAv. voc. *napō* (< *-ah*), acc. *napātəm*, *naptārəm*, *nafᵊδrəm*, gen. *naptō*, *nafᵊδrō*, pl. loc. OAv. *nafšū*

3. Analogy: YAv. *sāstar-/sāθr-* (for *-str-* in analogy with other *tar*-stems) '(false) teacher'

3.3. Endings

The case endings are mostly those inherited from Indo-Iranian. Special Avestan features include the proterokinetic genitive forms in *i-*, *u-*, *r-*, and *n*-stems (e.g., genitive singular **-ai-š*, *-au-š*, **-ar-š*, **-aŋ-h*), which are more common than in Old Indic and may represent an Avestan generalization of a type less common in Indo-Iranian; alternatively, Old Indic has lost this type.

Among the typically Young Avestan endings is the generalized ablative singular ending *-t̰*, by which the gen. is distinguished from the abl. in all declensions in the singular. Old Persian has this form (*-auv < *-aut*) beside the ablative = genitive (*-auš*).

Another Young Avestan feature is the addition of a final *-a* to the ablative singular and locative singular and plural endings, which is presumably identical with the Old Avestan particle *ā*, which is used to emphasize 'here and now/there and then' and is combined with a variety of local (temporal) cases. In Old Persian, a final *-ā* may be added to the loc. singular and plural.

In post–Old Persian the monosyllabic endings seem to have been largely lost or merged into a single vocalic ending, written *-a*, *-am*, *-ā*, *-ām*.

Nominative singular masculine/feminine
In Indo-Iranian (and Indo-European), the nom. singular of masculine and feminine was formed in various ways:

1. By adding the ending **-h/-š/-s* to the stem
2. By lengthening the last vowel of the stem and dropping the final consonant

3. By both lengthening the vowel of the stem and adding the ending *-h/-š/-s

4. By using the stem without further characterization

*Vowel stems with ending *-h/-š:*

The regular ending of the *a-*, *i-*, and *u-/ao*-declensions was *-h/-š. The Indo-Iranian forms were therefore *-ah, *-iš, *-uš/-āuš.

In Old Persian, the final *-h was lost without trace; in Avestan, it caused backing and rounding of the preceding vowels: *-ah > -ə̄ > -ō, *-āh > -å. In sandhi, the s was retained, and the endings were Av. -as° and -ås° (for *-ās), respectively. The ending -ə̄ is Old Avestan only; it is typical of the pronouns (*yə̄*, *kə̄*), but is occasionally found in nouns (and other grammatical forms in *-ah). The ending -š survived intact in both Avestan and Old Persian.

The laryngeal stems (*ā-*, *ū-*, *ī*-stems [*vr̥kī*-type]) also take this ending, e.g., °*då* (sandhi -*ås*°), *tanŭš*, *zarənaēᵢⁿīš* 'of gold'.

The feminine *ā-* and *ī*-stems (*devī*-type) have no ending in Avestan; in Old Persian, the *ī*-stems have -*ĭy* and -*ĭš*.

*Consonant stems with ending *-s/-š:*

The original ending -*s* is preserved only in dental stems, where the combinations -*ts*, -*ds* > *-ss* > *-s* (there are no nominative singular forms of *d*-stems).

Among *nt*-stems, the expected form -*ą̄s* is found in a few words (YAv. *cuuą̄s* 'how much?', *fšuiią̄s* 'husbandman'). In most Young Avestan adjectives and present participles, *-ant-s* > *-anss* appears to have been simplified to *-ans* (or the *t* was lost; cf. the *nk*-stems, below) early enough to become *-aŋh* (or the form was analogically remade), which developed as in the accusative plural (note also YAv. nom. sg. *cū*, presumably < *cuuaŋh*). The nom.-acc. singular neuter has athematic -*at̰* < -*n̥t*, thematic -*ən* < -*ant* (OAv. *yasō.x̌iiə̄n* < *yasahiən* 'seeking glory', YAv. *mąnaiiən* 'resembling').

The *t*-stem *napat-* and the *uuaṇt-* and *mant*-stem adjectives have nominative and vocative singular from *h*-stems (Av. *napå*, OP *napā*; OAv. *drəguuå*, OP *tunuvāʰ*; YAv. *xratumå* 'wise').

In all other consonant stems the ending becomes -*š*. The labial *p* becomes the spirant *f* (YAv. *āfš*, *kərᵊfš*). Velars (*k*, *g*) become the spirant -*x*- (YAv. *vāxš* < *vak*-; *druxš* < *drug*-) except in the *nk*-stems, where the -*k/x*- was lost (YAv. *apą̄š* 'backward-turning', *paiti.iią̄š* 'turning toward', *viš* < *vi̯š* 'going to all sides'). The *nk*-stems may have had lengthened grade (as in Old Indic), but the Av. *ą* is ambiguous.

The *s*- and *z*-stems were from Indo-Iranian stems in *-ć-* and -*j́-*; in the nominative singular the final clusters (*-ćš* and -*j́š*) were simplified to -*š* according to the general rules (YAv. *spaš* < *spas*-; OAv. *maš* < *maz*-; YAv. *barᵊš* < *bərᵊz*-).

The nom. *ātarš* of the originally neuter *r*-stem *ātar*- is probably an analogical formation (see above on *r*-stems).

In Old Persian, no forms of this type are attested. It is indeed not certain what would happen to the final clusters, but in line with the general avoidance of final consonants, they would probably be felt as inadmissible

and possibly be lost.[25] This would in turn probably result in a whole-sale analogical remaking of the nominative or shift into a different stem class. This seems to be the case of the two root nouns *ā̆p-* and *māh-*, the nom. sg. forms of which would be *ā(fš)* and *mā^h* and which, apparently, were both transferred into the *ī*-declension (like the irregular *pantā-/paθ-*, > OP *paθī-*): *āpī-* (nom. *āpī°* or *āpiš°*) and *māhī-* (gen.-dat. *māhī̆yā*).[26]

Vocative singular

With the exception of feminine *ā*-stems, the vocative singular is identical with the stem, with the stem formant in the full or zero grade. Thus, *a*-stems have **-a* (OAv. *ahurā*, *mazdā* < **mazdaH*, OP *martiyā* 'man', *marīkā* 'young man'); *i*-stems have **-ai* (OAv. *ārma^itē* 'humility', YAv. *hāuuane*, 'genius of the time before dawn'). Consonant stems with ablauting suffix have zero grade (OAv., YAv. *ātar^ə*, YAv. *nar^ə*, *pitar^ə*, *dātar^ə* with *-ar^ə* < **-r̥*; *humanō*, *druuō*; *napah-*: *napō*; *uuan-*stems: *ašāum*, *āθraom*, *yum*, *θrizafəm*; see above §3.2.2). When a consonant stem does not show ablaut, the vocative = nominative.

In Young Avestan, the full grade ending **-au* in the *u-* (*ao-*) stems is normally realized as *-uuō*, since the vocative does not admit enclitics (*ratuuō* < *ratu-* 'model', *ər^əzuuō* < *ər^əzu-* 'upright, straight'), but appears as *-ao* (?) in the compounds *gaohudā̊* 'O cow giving good gifts', *gaospəṇta* 'O life-giving cow'. After *i̯*, the ending appears as *-ō*, presumably by assimilation or by simplification of the *i̯u̯*-group (*maniiō* < *maniiu-* 'spirit', *vaiiō* < *vaiiu-*, name of a god).

The *ī*-stems (*devī*-type) had IIr. **-i* and the *ā*-stems **-ai*, perhaps with the *-i* of the *ī*-stems; *aši-* 'reward' has the irregular voc. *aši* (e.g., *aši srīre* 'O beautiful Aši!'). In *arəduī sūre* 'O Arəduī Sūrā', the ending is usually long in the manuscripts.

Initial stress may be responsible for the lengthening of the *a* in the first syllable of *zā^ire* (< *za^iri-* 'tawny') and the shortening of the *ā* in the second syllable of *spitama* (< *spitāma-* 'having swollen strength(?)', standing epithet of Zarathustra).

In Old Persian, only the vocative of *a*-stems is attested.

Accusative singular masculine and feminine

The endings of the singular are *-m* in vowel stems and *-əm* in consonant stems (OAv. *drujə̄m*). The manuscripts are not consistent in writing short or long *-im/-īm* and *-um/-ūm*. Old Avestan seems to prefer the long variants before *-m*.

The accusative singular of ablauting stems—diphthong and consonant stems—typically takes the long grade (OAv. *vācəm*).

The *iia*-stems regularly have OAv. *-iiə̄m*, OYAv. *-ĭm* (e.g., OYAv. *mašīm* < *mašiia-* 'man', OAv. *aniiə̄m* and *a^inim* < *aniia-* 'other', YAv. *ma^iδim*

25. The only OP word ending in *-s* is the reconstructed, hence doubtful, **daθa^ns*.

26. OP <p-θ-i-m> and <a-p-i-°> could in principle be short *i*-stems. The nom. *āpi(š)* is only in <a-p-i-š-i-m> which can be read as *ā̆pĭ-šim* or *ā̆piš-šim* 'the water (carried) him (away)'.

< *ma^iδiia-* 'middle'). The *uua*-stems have YAv. *-ǔm* (e.g., *drǔm < druua-* 'healthy').

In the *ao*-stems, the acc. sg. *daŋhaom < -ā̊u̯am* 'land' is the 'normal' form (only in Yt. 10). The form *dax̂iium* is OAv., but is also found in the YAv. formula *nmānəmca vīsəmca zaṇtumca dax̂iiumca* 'the house, the town, the tribe, and the land'. The forms *nasāum < nasao-* 'carcass' and *pərəsāum < pərəsao-* 'rib' occur only in the *Videvdad*. There seems to be no system in the distribution of the forms *nasāum* and *nasum*. The monosyllabic *gao-* has acc. sg. *gąm* (cf. acc. pl. *gå*).

The form *auuåṇtəm* 'that much' was probably influenced by *mazåṇtəm < mazānt-* 'big' (Gershevitch 1967: 152).

The *m*-stems *zam-* and *ziiam-* form their nominative and accusative singular from the stems *zā-* and *ziiā-*: *ząm, ziiąm*.

Nominative-accusative neuter singular

Neuter stems take no endings in the nominative-accusative singular, except the *a*-declension, where the ending is *-əm* (Av. *-ə̄m*) = masc. acc. sg. The *i*- and *u*- stems have weak grade of the stem formants (*-i, -u*). The nominative-accusative singular neuter of thematic participles has the expected ending *-ən < *-ant*, that of athematic verbs is *-aṯ* as in adjectives. The *Hant*-stem *mazānt-* may have had **mazāṯ* (Yt. 10.44, mss. °āṯ and °āδa).

Instrumental singular

The ending of the instrumental singular is *-ǎ̆* in all declensions, including in hysterokinetic *aē*-stems and *u*-stems (*-i̯ǎ̆, -u̯ǎ̆*), but excepting the *i*- and *u*-stems, which have *-ī̆* and *-ū̆*.

In the *ā*-declension, forms with *-aii-* are most common (YAv. *-aiia*), but forms with no ending (YAv. *-a*) are also found; the *ī*-stems have only *-ī̆i̯ā* (Av. *-iiǎ̆*, OP *-īyā*).

The masculine *ā*-stem *paṇtā-* has ins. sg. *paθa*.

The instrumental singular of *zam-* is *zəmā* with long final *ā* (*pa^iti āiia zəmā* '[all] over this earth'), which indicates that it is monosyllabic (cf. OInd. *jmā́*).

Dative singular

The dative ending in the singular was **-ai*, which merged with the stem vowel of *a*-stems to form the ending *-āi*. In Old Avestan, *āi* can be followed by *ā* (*-āi.ā*), which is commonly assumed to be for **āiiā* (cf. OInd. *-āya*).

The *ā*- stems have Av. *-aiiāi*, the *ī*-stems Av. *-iiāi*. Only *gaēθā-* '(world of) living beings' regularly has YAv. *gaēθiiāi* (in the mss.) rather than **gaēθaiiāi*. This is no doubt due to the frequent expression *astuua^iθiiāi gaēθiiāi < astuua^itī- gaēθā-* 'the bony world of living beings'. In metrical texts *gaēθiiāi* counts three syllables.

In other declensions the ending **-ai* became OAv. *-ōi*, OYAv. *-aē°*, *-^iě̆*. The palatalization is seen clearly in the ending *-aŋhe* of the *h*-stems.

The proterokinetic *i*-stems have dative in OAv. *-ōii̯ōi*, YAv. *-ə̄e*, *-aiiaē°*, while hysterokinetic *i*-stems and the *aē*-stems have OAv. *-iiaē°*, YAv. *-^ie*.

The proterokinetic *u*-stems and the *ao*-stems have dative in OAv. *-auuōi*, *-auuē*, YAv. *-auue*/*-aoe*. The hysterokinetic *u*-stems and the *ū*-stems have *-uiiĕ̄* < *-uu̯ai*.

In the hysterokinetic YAv. *u*-stems in *-tu-*, the original ending *-tu̯ai* became *-θβe* before *-u̯ai* developed to **-uu̯ ᶦe* > *-uiie*, and in stems in *-hu-* the ending *-u̯e* combined with the preceding *-ŋh-* to form *-ŋᵛhe*. In Old Avestan, this development did not take place.[27]

Genitive, genitive-ablative singular

The most common ending in Indo-Iranian was **-h*/*-š*, which behaved like the nom. **-h*/*-š*. This **-h*/*-š* was sometimes added directly to the stem, sometimes preceded by an additional *-a-*.

The only exception is the *a*-stems, which have the ending **-ahi̯a*, OAv. *-ahiiā* (*-aẋiiā°*), YAv. *-ahe*, OP *-aha)ā*. The YAv. gen. ending is found in OAv. *zaraθuštrahē*. The YAv. form *ašaŋ́hācā* is perhaps archaizing.

The *ā*- stems have Av. *-aiiå*, OP *-āyāʰ*, and the *ī*-stems Av. *-iiå*, OP *-ĭ̄yāʰ*.

Proterokinetic *i*- and *u*-stems have full grade of the stem formant: OAv. *-ōiš* and *-ə̄uš*, YAv. *-ōiš* and *-aoš*, OP *-aiš* and *-auš*. Many YAv. *u*-stems take the OAv. ending *-ə̄uš* instead of or beside *-aoš*, principally words "with strong Old Avestan connection."

The consonant stems (including many *n*-stems), the hysterokinetic *u*-, *n*-, and *r*-stems, and the *ū*-stems take the ending **-ah*, which behaved like the nom. sg. of *a*-stems.

The *u*-stem *ratu-* has YAv. gen. sg. *raθβō*, but the archaizing(?) form *ratə̄uš* is also found (*Vispered* 9.6).

Proterokinetic *n*- and *r*-stems took the simple ending **-h*/*-š*. In the *n*-stems the resulting ending **-aŋh* developed as in the acc. pl. masc. of *a*-stems (YAv. *barᵊsmą* < *barᵊsman-*, sacred twigs, *barsom*, etc.). The *r*-stems had **-r̥š*: OAv. *-ərᵊš*, YAv. *-arš* (OAv. *nərᵊš*, YAv. *narš*, *sāstarš*, etc.).

Ablative singular

The ablative singular was originally identical with the genitive in all declensions except the *a*-declension, where the characteristic ending was **-t*, before which the stem vowel of the *a*-stems was lengthened to give *-āt̰*, *-āat̰* before enclitic (OAv. *zaošāt̰* < *zaoša-* 'pleasure', *vīrāat̰°* < *vīra-* 'man').

In Young Avestan, the *-t̰* spread to the other declensions (probably also in OP), where the ablative is obtained by substituting *-t̰* for the original **-h*/*-š* of the genitive, e.g., *daēnā-* 'vision soul': **daēnaiiā-h* ⇒ *daēnaiiāt̰*, *barᵊzaṇt-* 'tall': **barᵊzata-h* ⇒ *barᵊzatat̰*, *gairi-* 'mountain': *garōi-š* ⇒ *garōit̰*, *barᵊsman-* 'barsom': **barsman-h* ⇒ **barsmant* > *barᵊsmən*, *nar-* 'man': *nərᵊ-š* ⇒ *nərᵊt̰*.

In Young Avestan, an *-a* may be added to the ending (*-āδa*, *-aēδa*[?], *-məṇda*), apparently with the specific meaning 'all the way to, up to and including(?), throughout': *xšaθrāδa* 'throughout (Yima's) reign',

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27. In late manuscripts we sometimes find *at̰* instead of *aē* (e.g., *-aiiat̰ca* for *-aiiaēca*), which may a graphic error: *-at̰-* ⲱⲉ instead of *-aē-* ⲱⲩ.

pa^(i)tiš.x^(v)ar^(ə)nā δa 'up to and including the jaw(?)', *drujō vaēsmə ṇda* '(all the way) to the entrance hall of the Lie' (Yt. 10.86).[28]

Locative singular

The locative singular is formed in one of two ways:

1. With the ending *i*, with or without an additional *-ắ* (> Av. *-iiắ*, YAv. *-^(i)e*, OP *-iyā*). Note that this *-ắ* makes a separate syllable (*-i^(ʾ)ắ*, not *-i̯ắ*). In the *a*-stems the ending *-i* combines with the stem vowel to produce the diphthong **-ai* (OAv. *-ōi* or *-^(i)ē*, YAv. *-^(i)e*; in sandhi: OYAv. *-aē°*).

The *ā*-stems have **-āi̯ắ*: YAv. *-aiia*, OP *-āyā*, and the *ī*-stems **-ĭyắ*: YAv. *-^(i)e*(?), OP *-ĭyā*.

Consonant stems sometimes take the full grade, sometimes the zero grade. In Young Avestan, the ending is *-i* or *-e*, which is either < *-iia* or the thematic ending; Old Persian has *-iyā*. Young Avestan forms such as *apaiia* (< *ap-*) and *ašauuanaiia* are probably for **-iia* with epenthesis. The *ū*-stems had *-i* (YAv. *tanuui*).

2. With full or lengthened grade of the stem formant and no ending. Thus the *i*-stems have the ending *-ắ* < **ā(i)*, and the *u*- and *ao*-stems have the ending **-au* (> YAv. *-uuō*, *-ao°*, *-auua*, OP *-avā*). In Old Avestan, the original ending may have been *-ao* (*-aō*), as well, which is occasionally found in good manuscripts. More often we find *-āu*, *-å*, or *-ā*. Of these I suspect *-āu* and *-å* are rationalizations of *-ao* (*-aō*). The ending *-ā* could be genuine, corresponding to OInd. *-ā* beside *-āu*, but OInd. *-ā* may be secondary after the *i*-stems.[29]

The *n*- (*-r/n-*) and *m*-stems take the ending *-i* or no ending: OAv. *ạnmə̄nī* 'breath, wind', *cašma^(i)nī* and *cašman* 'eye', *dạm < dam-* 'house', YAv. *aiiạn < aiiar/n-* 'day', *dạm* and *dạmi*, *zəmi* (disyllabic).

Nominative-vocative-accusative dual

The endings of the nom.-voc.-acc. dual are:

Av., OP *-ắ* in masculine *a*-stems (OAv. *yə̄mā* 'twins', YAv. *gaoša* 'ears', OP *gaušā*), diphthong stems (OAv. *gāuuā*, YAv. *°gāuua < gao-* 'cow, bull', *bāza- uua < bāzao-* 'arm'), and masculine and feminine consonant stems (OAv. *hauruuatātā amərətatātā* 'wholeness and undyingness', YAv. *āpa* 'water (and plants)', *pāδa* 'feet', *rasmana* 'battle lines', *nara* 'men', *nåŋha* 'nose < nostrils', *bərəzaṇta* 'tall')

OAv. *-ōi*, OYAv. *-ĕ̄* in feminine *ā*-stems (OAv. *ubē* 'both', YAv. *uruua^(i)re* '(water and) plants' and neuter *a*-stems (OAv. *šiiaoθanōi* 'two (kinds of) actions')

Av. *-ĭ̄* in neuter consonant stems (OAv. *manahi°* 'two [kinds of] thoughts', *sāx^(v)ə̄nī*[?] 'two *instructions', YAv. **bara^(i)ṇti*[?] 'carrying' V. 3.11, *x^(v)a^(i)riiaṇti* 'edible, tasty[?]' Yt. 19.32; Skjærvø 1999b: 186–87), perhaps OP *uš-ĭ̄y* 'senses(?)'

28. See Vaan 2001. Forms in *-aēδa* are less certain (perhaps **aiβišitaēδaca* and **upaši- taēδaca* in Yt. 19.6).

29. Examples of loc. sg. forms in *-ō* are cited in the handbooks (e.g., Hoffmann and Forssman 1996: 130) but these are all in texts with poor manuscript transmission. See Skjærvø 2005.

The *i-*, *ī-*, and *u*-stems have no endings (OAv. *x^vītī° ənə^itī* < **hu-/an-iti-* 'good going and non-going', *azī* 'pregnant', *maniiū* 'spirits', YAv. *bao^iδi* '(firewood and) incense', *saŋhauuāci ar°nauuāci* '(the sisters) Saŋhauuācī and Arnauuācī', *pasu vīra* 'beasts and men').

Dative-ablative-instrumental dual
The dative-ablative-instrumental dual ends in *-biia* (OAv. *-biiā*), for which we sometimes find YAv. *-βe* or *-uue*, with *-e* < *-iia*.[30]

Genitive dual
The genitive dual ending was **-āh* (Av. *-å*) preceded by *-aii-* in the *a-* and *ā*-stems (Av. *-aiiå*, OP *-āiiā^h*).

Locative dual
The locative dual ending was OAv. *-ō* (*-aiiō*, *-ōiiō*).
In Old Persian, the genitive = locative dual.

Nominative-vocative plural
The nom.-voc. plural ending of masculine and neuter *a*-stems was proto-Ir. *ā* (but OInd. *-ās*). The nom.-voc. plural of YAv. *aməṣa- spəṇta-* is *aməṣ̌ā spəṇta* beside the more frequent *aməṣ̌å spəṇta*. Note also *a^ire* < *a^iriia-* 'Aryan'). Masculine *a*-stems have the alternative ending **-āhah*: Av. *-åŋhō*, OP *-āha^h*.

The nom.-voc.-acc. plural ending of feminine *ā-* and *ī*-stems was **-h/-š*, Av. *-å*, *-īš*.

The nom.-voc. plural ending of other stems was **-ah* for both masculine and feminine nouns. Not infrequently, however, the thematic ending *-a* is found in the manuscripts, often probably as a transmission error. The nom.-voc. plural typically requires the strong stem. In stems without ablaut nom. pl. = acc. pl.

The *i-*, *aē-*, and *u*-stems have full grade of the stem formant: *-aiiō*, *-auuō*, while the *ao*-stems have lengthened grade of the stem formant: *-āuuō*. The nominative plural of *gao-* is *gauuō* in its only occurrence (*Aogəmadaēca* 83), with **āu̯* > Av. *auu*. The *u*-stem *pasu-* takes the zero grade of the stem formant throughout its declension (nom. pl. = acc. *pasuō*).

Nominative-accusative neuter plural
The nom.-acc. plural of neuter *a*-stems is *-ắ*.[31] The *i-* and *u*-stems probably lengthened the stem vowel, but in Avestan and Old Persian the plural = singular. The *n-*, *r/n-*, and *h*-stems form the nom.-acc. plural by lengthening the final syllable of the stem.

Other neuter consonant stems appear to take the ending *-i* in the nom.-acc. plural, e.g., *ast-* 'bone', YAv. pl. *asti*.

In Old Avestan, one or the other method was apparently used: *anafšmąm* (for *°mąn*) 'without rhythm(?)', but *nāmə̄nī* < *nāman-* 'name'.

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30. The apparent exception is *bruuaṯ.biiąm* (V. 8.41, etc.) of uncertain form and genitive(!) function, 'eyebrow' being simply **brū-*. The similarity with OInd. *-bhyām* is therefore coincidental.

31. In Young Avestan, neuter *a*-stems frequently become feminine *ā*-stems in the plural.

Accusative plural

In the plural, vowel stems have endings descended from proto-Avestan *-ŋh/-nš, except in the feminine ā- and ī-stems (*devī*-decl.), where the -*n*- was lost already in Indo-European, so that their acc. = nom. pl.

Masculine *a*-stems had the ending *-*aŋh, which developed regularly to *-əŋ(h), OAv. -ə̄ŋg, YAv. *-ə̄ > -ə̄ or -ą, in sandhi OAv. -as° (once *yə̄ŋgstū*), YAv. -ə̄s° or -ąs°. After *uu* the -ə̄ was assimilated to -ū, and the preceding *uu* could be lost (*daēuuū/daēū < daēuua-* 'demon', *grauuūsca/graūsca < grauua-* 'handle'). The Old Persian ending is -ā, the reading and etymological interpretation of which is uncertain.[32]

In *i*- (*aē*-) and *u*- (*ao*-) stems, the combinations *-inš and *-unš became nasalized *-įš and *-ųš, which developed into OAv. -īš and -ūš, YAv. -ĭš and -ŭš. The monosyllabic *ao*-stem *gao-* has acc. pl. *gå* (< *gāh*; cf. acc. sg. *gąm*).

In *r*-stems the original ending *-rnš must first have become *-ərš, with a nasalized vocalic *r*, which was then realized (written) either as -ąrš or -ərə̄š, with the usual substitution of *ą* or *ə̄* for *ə*. The ending -ərə̄š in time came to be felt as incorrect, and the diphthong ə̄u was introduced to produce the form -ərə̄uš frequently found in the manuscripts (*strə̄uš < star-*, *nərə̄uš < nar-*, with the familiar ending -ə̄uš of the *u*-stems).

In consonant stems, the Indo-European ending *-n̥s had become *-as in proto-Indo-Iranian, which developed and behaved like the nom. sg. of *a*-stems.

Instrumental plural

The instrumental plural has two allomorphs in Avestan: -āiš (*a*-stem) and -biš (all other stems). Old Persian has -aibiš also in the *a*-stems. The only Young Avestan example is *āfriuuanaēᶦbiš < āfriuuana-* 'friendly-making(?)' in a poorly transmitted text (Fragment Westergaard, in Westergaard 1852–54: 331–34). The use of -biš in the *a*-stems is presumably analogical with the demonstrative pronoun *aibiš: YAv. *aēᶦbiš*.

Young Avestan has -biš after a consonant (*cuuaṯ.biš < cuuaṇt-* 'how much') and analogically in vowel stems (*gaēθābiš, āzīzanāᶦtibiš < āzīzanaᶦtī-* '(woman) about to give birth'). The expected form of the *ah*-stems, *-azbiš, has been replaced by -ə̄biš, as if *-ah.biš. After vowels, Young Avestan must have had *-βiš > *-uuiš (*-aoiš), but no such forms are attested directly; instead, the phonetic modifications, together with various analogies, eventually produced the moderately productive ending -ĭš, which was replaced by OAv. -biš in some declensions, but commonly also by the dat.-abl. ending (!). Old Persian has *ăbiš < *ăb-biš < *ăp-biš < ăp-* 'water'.

The expected phonetic developments are nowhere preserved intact, but probably in disguise in the following cases: the ins. pl. forms *vaŋhuš, vaŋuhiš < vaŋhu-* 'good' and *auuaŋᵛhīš < auuaŋhu-* 'un-good' (mss. *au-*

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32. According to Oswald Szemerényi (*Scripta Minora 4* [Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft, 1991] 1956–60), the ending may have had a final, unwritten -*n*, which became -*m* before a labial in *abiy sakām pasāva* (DB 5.21–22); since *sakām* is the last word of a sentence and *pasāva* begins not only a new sentence but a new section of the inscription, this hypothesis remains weak, however.

uaŋhīš, auuaŋhūš) are presumably all for **-ŋhuuiš < *-ŋhuβiš*; *yātuš*, if genuine, must be for **yātuuiš < *yātuβiš < yātu-* 'sorcere'; *ažiš < aži-* 'dragon' coordinated with ins. forms in *-āiš* (Yt. 5.90) may be for **ažiuuiš*.

In the ins. plural of *n*-stems we have the ending *-ĭš*: *nāmənĭš, ašaonĭš*, and *sŭnĭš*. The simplest explanation of these forms, in my opinion, is that the forms **nāmə̣uiš* and **ašau̯ə̣uiš*, compared with the other oblique plural forms, instead of being remade into **nāməbiš* and **ašauuəbiš*, were simply felt to miss an *n*, which was substituted for the 'irregular' *uu*. In *ašaonĭš* the regular weak stem was then also reintroduced. The original ins. plural of *span-/sun-* 'dog' must have been (**ḱun̥-bhis > *spabiš >*) **spaβiš > *spauuiš > *spaoiš/*spə̣uuiš*, which, for obvious reasons, was remade as *sŭnĭš* after the pattern of *ašaonĭš*: weak stem + *-ĭš*. This procedure produced forms that looked like they were made from the weak stem with the ending *-ĭš*, which may then have analogically supported the irregular *u-* and *i*-stem forms above.

Dative-ablative plural

The ending of the dat.-abl. plural is Av. *-biiō* (*-biias°*), before which the *a*-stems have the diphthong *aē* (OAv. *aē* or *ōi*).[33] After vowels, in Young Avestan, this ending became *-βiiō* and *-uuiiō/-uuᵃiiō* (*xštəuuiβiiō xštauui-*, ethnic(?), *vōiɣnāuiiō < vōiɣnā-*, a kind of natural disaster, *gaēθāuuᵃiiō, rasmaoiiō < rasman-* 'battle line', *ašā̆uuaoiiō, nəruiiō/nuruiiō < nar-*), but these forms are found only rarely, having been replaced by the postconsonantal (and OAv.) forms in *-biiō*.

The *p*-stem *ā̆p-* has dat.-abl. pl. *aⁱβiiō* (*< *abi̯ah < *ab-bi̯ah < *ap-bi̯ah*).

The form *maniiaoibiias°* (*< maniiauua-*) must be a replacement for **mani̯a(u̯)ōi̯ah* (or sim.) *< *mani̯au̯aⁱu̯i̯ah*.

As in the ins., the expected form of the *ah*-stems, **-azbiiah*, has been replaced by *-əbiō*, except *ą̇zaŋhibiiō < ą̇zah-* 'constriction, tight place'.

Genitive plural

The genitive plural ends in *-ąm*, before which an *-n-* is inserted in most of the vowel (incl. *ū*-stems) stems. Hysterokinetic *i-* (*aē-*), *u-*, and monosyllabic *ao*-stems have the endings **-i̯ąm* and *-u̯ąm* (YAv. *kaoii̯ąm < kauui-* 'poet-priest', *haṣ̌ą̇m < *haci̯ā̆m < haxaē-* 'companion', *raii̯ąm < raē-* 'wealth', *gauu̯ąm, pasuu̯ąm, raθβąm*).

In the genitive plural, the Avestan manuscripts have short vowels in the *a*-stems (*-anąm*), except in *mašiiānąm* (possibly influenced by *mašiiāka-* 'people', itself being for expected **mašiiaka-*) and more often short than long vowels in the *i-* and *u*-stems (*-ĭnąm, -ŭnąm*). Old Persian has *-ānām* and *-ŭnąm* (written <-u-n-a-m> or <-u-v-n-a-m>).

Locative plural

The locative plural endings are *-hŭ/-šŭ/-sū* or with *-a* (YAv. and OP): YAv. *-huua, -šuua* or *-š.huua* (see §0.5), OP *-ʰuvā, -šuvā*.

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33. The dat.-abl. pl. *haēnəbiiō < haēnā-* in Yt. 10.93 is probably in anticipation of the following *draomə̄biiō*.

The final *-a* forms a separate syllable (*-uʾa*); therefore, *-huua* remains and does not become *-ŋᵛha*.

3.4. Comparative and superlative

The comparative and superlative of adjectives (including participles) and adverbs can be made in one of two ways: either with the suffixes *-tara-* and *-təma-* or with *-iiah-* and *-išta-*.

The suppletive type: Eng. *good ~ better*, is attested in OP *vazərka-* 'great', *maθišta-* 'greatest' (cf. MPers. *wazurg, mahī/meh, mahist*) and perhaps OP *naiba-*, **vahəyah-* (proper name *vahəyaz-dāta-*), **vahišta-* (cf. MPers. *nēw/nēk, wahī/weh, wahišt*). It seems not to be represented in Avestan.

The comparative in *-tara-* and superlative in *-təma-* are formed from the stem of adjectives (weak stem if ablauting) and with appropriate sandhi before the ending. The *a*-stems often use the "composition form" in *-ō* before these endings. This is the "regular" and productive type, which can be made from all kinds of adjectival words, even another superlative: *draē-jištō.təmaēšuuaca niᵘruzdō.təmaēšuuaca* 'among the poorest, among the most emaciated' (V. 3.19) < *draējišta-* < *driɣu-* 'poor'. A subgroup of this type contains prefixes with comparatives and superlatives in *-ara-, -ama-* (beside *-tara-, -tama-*):

Simple and derived adjectives and adverbs: OAv. *fᵊraša-* 'perfect', *fᵊrašō.təma-*; *poᵘru-* 'plentiful', *poᵘrutəma-*; YAv. *baēšaziia-* 'healing', *baēšaziiō.tara-, baēšaziiō.təma-*; *amauuaṇt-* 'powerful', *amauuastara-, ama-uuastəma-* (*-uuast-* < **-uṇt-t-*); *ašauuan-* 'orderly', *ašauuastəma-* (*-uuast-* for **-uua-t-* < **-uṇ-t-* in analogy with *uuant-*stems).

Prefixes and adverbs: *apa-* Av. *apara-* 'future', *apəma-* 'last'; *upa-* 'up above', *upara-, upəma-*; *aδara-* 'below', *aṇtəma-, maδəma-* 'middle'; with *-tara-, -tama-*: OP *apa-, apatara-* 'beyond(?)'; *fra-*, YAv., OP *fratara-* 'better' (OP also *fraθara-*), Av. *fratəma-*, OP *fratama-* 'foremost'; YAv. *nitəma-* and *ustəma-* 'last'.

Present participles: YAv. *haṇt-* 'being', *hastəma-* 'best'; *taᵘruuaiiaṇt-* 'overcoming, victorious', *taᵘruuaiiạstəma-*.

Compounds: *huδāh-* 'giving good gifts', *huδāstəma-*; *hubaoⁱδi-* 'smelling good', *hubaoⁱδitara-, hubaoⁱδitəma-*; *yāskərᵊt-* 'competitive(?)', *yāskə-rᵊstara-, yāskərᵊstəma-*; *vərᵊθrajan-* 'obstruction-smashing', *vərᵊθrajạstara-, vərᵊθrajạstəma-* (with *-ạst-* in analogy with present participles).

The comparative in Av. *-ĭyah-* (OP *-ĭyah-* and superlative in Av., OP *-išta-*) are made from the root in the full grade, also with appropriate sandhi before the ending. Adjectives with suffixes lose these.

Simple adjectives (only with stem vowel): no suffix: Av. *maz-* (and *mazāṇt-*) 'great', *maziiah-, mazišta-*; *a*-stems: Av. *aka-* 'evil', *ašiiah-* (< **ačiiah-*), *acišta-*; adv.: *bāδa* 'occasionally(?)', *bāⁱδištəm*; *u*-stems: Av. *āsu-* 'fast', *āsiiah-, āsišta-*; *driɣu-* 'poor', *draējišta-*; *ərᵊzu-* 'upright, straight', *razišta-*; *kasu-* 'small', *kasiiah-*; *vaŋhu-* 'good', *vahiiah-* (OAv. also *vaxⁱiiah-*, YAv. also *vaŋhah-*), *vahišta-*.

Adjectives with suffixes: suffix *-ta-*: Av. *masita-* 'long', *masiiah-, masišta-*; *spəṇta-* 'life-giving', *spaniiah-, spēništa-*; suffix *-ra-*: Av. *uɣra-* 'strong',

aojiiah-, aojišta-; namra- 'pliable', *nǝmišta-; xrŭždra-* 'hard', *xraoždišta-;* suffix *-ri-:* Av. *buⁱri-* 'plentiful', *baoiiah-, dbōišta-* (with *-ōi- < -ǝuui-*); suffix *-m/u̯ant-: xratumant-* 'wise', *xraθβišta-* (or superl. of °*xratu-* in compounds); OP *tunuvaⁿt-* 'mighty', *tauu̯ī̆yah-.*

Compounds: OAv. *zarazdā-* 'confident', *zarazdišta-.*

Roots with internal laryngeal: *darᵊya-* 'long' (< **dr̥Hga-*) *drājiiah-, drājišta-* (< **draHj-*); with suffix *-ra-:* Av. *ādra-* 'lowly' (< **ṇHd-ra-*), *nāⁱdiiah-* (< **naHd-ii̯ah-*); *srīra-* 'beautiful' (< **ćriH-ra-*), *sraiiah-* (< **ćraiH-ii̯ah-*), *sra-ēšta-* (< **srai̯H-išta-*); *stŭra-* 'sturdy, thick' (< **stHura-*), *staoiiah-* (< **staHu̯-ii̯ah-*), *stāuuišta-* (< **staHu̯-išta-*); *sūra-* 'rich in life-giving strength' (< **ćuH-ra-*), *sǝuuišta-* (< **ćau̯H-išta-*); *u-*stems: *poᵘru-* 'plentiful' (< **pr̥H-u-*), *frāiiah-* (< **praH-ii̯ah-*), *fraēšta-* (< **praH-išta-*).

Roots with internal *n: taxma-* 'firm' (< **tṇk-ma-*), *tąšiiah-* (< **tanč-ii̯ah-*), *tąncišta-.*

There are a few superlatives in *-išta-* of verbal derivatives, which structurally correspond to either present participles or forms of the type *-kara-* used in compounds: OAv. *maⁱrišta-,* cf. *marǝnt-* 'remembering, memorizing'; *baⁱrišta-,* cf. *barǝnt-* 'carrying' and °*bara-.*

A few adjectives have both kinds of superlative, but with semantic differentiation, e.g., *poᵘru-* 'much, many', OAv. superl. *poᵘrutǝma-* (OInd. *purutama-*) 'in highest numbers', YAv. *fraēšta-* 'most'; *spǝnta-* 'life-giving', OAv. *spǝ̄ništa-* 'most life-giving', *spǝṇtō.tǝma-* 'having the name *spǝnta-* in the highest degree(?)'; *aka-,* OAv. *ašiiah-* 'the (more) evil of the two', YAv. *akatara-* 'worse (for)'.

3.5. Adverbs

Adverbs can be invariable particles, case forms of nouns or adjectives, including compounds, or forms derived from nouns or pronouns.

Invariable particles: Av. *aⁱpī̆* 'hereafter'; OP *azdā* 'well-known(?)', OAv. *dᵃⁱbitā* 'from old, always(?)'; Av. *mošu°* 'soon, quickly'; Av. *paⁱti* 'in return', OP °*patiy* 'in addition'; OAv. *arǝm* 'in due measure(?)'; OAv. *nū,* Av. *nūrǝm,* OP *nūram* 'now'; OAv. *adǝ̄* 'below', *auuar⁵* 'hither!', *nanā* 'one way or another'; Av. *uⁱtī̆* 'thus, *quote*'.

Adverbs with the ending **-s* (Schindler 1987): *aš°* 'greatly' (< **mí̯-š;* cf. *maz-* 'great'), OAv. *ǝrᵊš* 'truly', YAv. *arš* (< **Hr̥í̯-š;* cf. *ǝrᵊzu-* 'straight'); cf. OAv. *āuuiš* 'openly'.

Adverbs of place and manner with modal and spatial suffixes: *-θra* 'where(to)', *-θa* 'how', *-da* 'where, when', YAv. *-δāṯ,* OP *-daš* 'from where/when',[34] 'from where', etc. (see on correlative pronominal adverbs, below). Note also OP *aʰma-taʰ* 'from there'.

Case forms:

Nom.-acc. neut. sg.: YAv. *daršaṯ,* OP *dạršam* 'strongly'; YAv. *darᵊγǝm,* OP *dargam* 'long, for a long time', YAv. *poᵘrum* 'in front', OP *paruvam* 'before';

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34. The ending *-daš* is to be explained by a proportion (Hoffmann 1992: 744–45): *bābirauv* 'in Babylon' : *hacā bābirauš* 'from Babylon' = *avadā* 'there' : X ⟹ X = *hacā avadaš* 'from there'.

YAv. *pao*ⁱ*rīm*, *bitīm*, OP *duviti̯am*, YAv. *θritīm*, OP *çiti̯yam* 'first(ly), secondly, thirdly (for the first/second/third time)'; YAv. *ha*ⁱ*θīm* 'truly', OAv. *vasā̆*, OYAv. *vasō* 'at will'; OP *apataram* 'farther away', *kamnam* 'in small numbers', *vasiy* 'greatly'.

Abl. sing: Av. *dūrāt̰*, OP *dūradaš* 'from far away'.

Loc. sg.: Av. *dū*ⁱ*rě̄*, OP *dūraiy (apiy)* 'in the distance, far away'; YAv. *a*ⁱ*rime* 'in peace'; OP *ašnaiy* 'close' (see also §3.8.2).

Compounds: YAv. *frā.āpəm* 'with the stream', '*pa*ⁱ*tiiāpəm* 'against the stream', *yaθā.kərᵊtəm* 'as it is done', OP *pati-padam* 'in place', *duvitāparnam* 'in two branches', *ni-padiy* 'in the footsteps of, close behind', *pasāva* (< *pasā-ava*) 'after that, afterward', *para-draya*ʰ 'beyond the ocean'.

3.6. *Pronouns*

The Avestan pronouns are of the Indo-Iranian type: personal, demonstrative, reflexive-reciprocal, relative, interrogative, and indefinite (indefinite relative).

The personal pronouns distinguish three persons; the third person distinguishes three genders. Many have enclitic forms, including the 2nd sg./pl. nom.

The demonstrative pronouns have three-way deixis of varying emphasis. They all have two (or more) stems, one reserved for the nom. masculine and feminine, the other for the other cases, or a more complex distribution.

There are two near-dexis (1st pers.) pronouns: *aii-/ima-* 'this' is used of things near the speaker and things in this world, as opposed to in heaven, but also something impending, hence 'the following'; *aēša-/aēta-* 'this' partly overlaps with *aii-/ima-*, but most frequently refers to *the matter at hand*, both what has been said and what is going to be said; in the legal books of the *Avesta*, it is therefore used in the sense of 'this X in question', 'the aforementioned'.

The Old Avestan pronoun (nom.) *huuō* 'he, that one' may originally have had 2nd-person deixis: 'he, that one (near you)' (Watkins 2000). In the Old Avesta it appears to refer to somebody in the vicinity of the speaker and the one spoken of/to (the one currently "on stage"). The oblique stem *ana-* can, apparently, be used with "derogatory" deixis (cf. Latin *iste*, Spanish *ese*).

The original 'that'-deixis pronouns are *ha-/ta-*, with weak deixis (also used as 3rd pers. personal pron.) and *hāu/auua-* with strong 'yonder'-deixis, notably used about things in heaven.

The relative pronoun has the IIr. stem *ya-*, which in Old Persian was univerbated with the 3rd pers. personal pronoun to form the system *haya-/taya-*. The nom.-acc. neut. is OAv. *hiiat̰* (of unclear origin), YAv. *yat̰* (*hiiat̰* in a few "archaizing" formulas).

The interrogative and indefinite pronouns are formed from the IIr. stems *ka-* and *ci-*.

Special pronominal forms

Pronouns are basically inflected according to the *a-* and *ā-*declensions, but with some special "pronominal" case endings inherited from Indo-

European, notably neut. nom.-acc. sg. *-at* (YAv. *-at̰*, OP *-a^t*); masc. nom. plur. ***-ai** (YAv. *-^ie*, OP *-aiy*); dat. sg. of the personal pronouns 1st and 2nd pers. in **-bi̯a(h)*; the element **-hm-* (Av. *-hm-*, OP *-^hm-*) in several oblique cases masc.-neut.; and **-hi̥-* (Av. *-ŋ́h-*, OP *-hay-*) in several oblique cases feminine; the elements masc. **-aiš-*, fem. *-āh-* in the gen. plural.

There are some Old Avestan feminine singular forms in *-aē*, e.g., *x^vaē°* (cf. Latin *quae*).

Some pronominal forms are also found in "pronominal" adjectives, including the Old Avestan possessive pronouns *ma-* 'my', *θβa-* 'thy', Av. *aniia-*, OP *aniya-* 'other', Av., OP *hama-* 'one and the same', OP *haruva-* 'whole', Av. *vīspa-*, OP *visa-* 'every, all': neut. nom.-acc. sg. YAv. *aniiat̰* (but *vīspəm*), OP *aniya^t*, *aniyaš-čiy*;[35] masc. dat. sg. YAv. *aniiahmāi*, *vīspəmāi* (< **vispəm̥āi*?); fem. gen., dat., loc. sg.: OP gen.-dat. *hamahạyāyā*, loc. *haruvahạyāyā*; nom. pl. YAv. *aniie*, *vīspe*, OP *aniyaiy*, *visaiy*; gen. pl. YAv. *aniiaē-šạm*, *vīspaēšạm*.

Reflexive and reciprocal pronouns

For 'own' Avestan has *x^va-/hauua-* and Young Avestan also *x^vaēpa^iθiia-*.

For 'self', the closest Young Avestan equivalent is *tanū-* 'body', with or without *hauuā-* or *x^vaēpa^iθiiā-*, as in *azəm tanūm aguze* 'I hid my own body' (Yt. 17.55) and *haom* (for *hauuạm*) *tanūm guzaēta* 'he should hide his own body' (Yt. 4.4), *haca hauuaiiåˢ tanuuō* 'away from one's own body' (V. 10.5), *x^vaēpaiθiiåˢ tanuuō* 'of (their) own body' (Yt. 10.23).[36]

Old Persian has *^huvaipašiya-* 'self' and *^huvāipašiya-* 'own'.

Interrogative and indefinite pronouns

The interrogative pronouns *ka-* and *ci-* 'who', *cit̰* 'what', *katăra-* 'which (of two)' can be made indefinite by means of the particle *-cit̰*, repetition, or a combination of the two, e.g., YAv. *katarascit̰* 'each (of the two)', *kəmcit̰* 'each', *kahmāicit̰* 'to whomsoever', *kahe kahiiācit̰* 'of each and every one', *kahmi kahmicit̰* 'in each and every', *kaṅ́he kaṅ́he* 'in each and every'; OP *kaščiy* 'anybody', *cišciy* 'anything'.

Indefinite relative pronouns and indefinite adverbs are formed in the same way: *yat̰cit̰* 'whatever, whenever', *kuuacit̰* 'wherever'.

The indefinite particles *-ca* and *-cana* are less common, e.g., OAv. *cišcā*, *caiiascā*, *cīcā*; YAv. *cišca* 'whoever, everyone', *kaθacina* 'however'.

The negative indefinite pronouns are identical with the interrogative pronouns prefixed with the negation in Avestan, e.g., *naēciš* 'nobody', *mā-ciš* '(let) nobody'; Old Persian has *naiy . . . kaščiy/cišciy* 'nobody, nothing'.

Correlative pronominal adverbs

The pronominal stems give rise to numerous derived "rhyming" forms, adjectival and adverbial. These are often found in pairs e.g.:

i- 'here and now': OAv. *idā*, YAv. *iδa*, OP *idā* 'here'; Av. *iθā* 'in this manner'; YAv. *iθrā* 'here'

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35. Also by a proportion for **ani̯at-cit*: masc. sg. *aniya* : *aniyaš-ciy* = neut. sg. *anya* : X ⇒ X = *aniyaš-ciy*. Similarly also *cišciy* 'anything' (below) for *cit-cit.

36. Cf. Modern Persian *x^vīš* and *x^vīštan*.

āeta- 'this': YAv. *aētaδa* 'here'; *aētauuaṇt-* 'this much'

a- 'then and there': OAv. *adā*, YAv. *aδa*, OP *ada°*, *adakaiy* 'then'; YAv. *aδāṯ* 'from there'; Av. *aθā* 'in that manner'; Av. *aθrā* 'there'; YAv. *auuaṇt-*, OP *avā* 'that much'

auua- 'yonder': YAv. *auuaδa*, OP *avadā* 'there'; OP *avadaš* 'from there'; YAv. *auuaθa*, OP *avaθā* 'in that manner'; YAv. *auuaθra* 'there'; YAv. *auua-uuaṇt-* 'that much'; OP *avākaram* 'of that kind'

ātara- 'that one (of two)': YAv. *yatāra-* 'which (of two)', *katāra-* 'which (of two)?', *ātaraθra* 'on that side (of two)'

ya-, rel.: OAv. *yadā*, YAv. *yaδa*, OP *yadā* 'when'; YAv. *yaδāṯ* 'whence'; Av. *yaθā* 'in what manner'; Av. *yaθrǎ* 'where'; Av. *yauuaṇt-* 'as much (. . . as)'

ka-, *ku-*, *c-* interr.: OAv. *kadā*, YAv. *kaδa* 'when?'; Av. *kaθā* 'in what manner?'; OAv. *kudā*, YAv. *kudaṯ* 'from where?'; Av. *kuθrǎ* 'where?'; YAv. *cuuaṇt-* 'how much?'; OP *ciyǎkaram* 'of what kind?'

aniia- 'other': OAv. *aniiada°* 'elsewhere', OAv. *aniiāθā* 'differently'

3.7. *Number words*

Quite a few cardinals, ordinals, and other number words are attested in Young Avestan, while Old Avestan has hardly any. In Old Persian, few number words are spelled out, though several Old Persian numerals are found in Elamite texts.

The cardinals 'two' and 'three' have archaic feminine forms with the formant *hr/šr*.

The numerals 'one' to 'four'

'One'
'One' is Av. *aēuua-*, OP *aiva-*. Among the forms of *aēuua-*, note YAv. acc. sg. masc. *aōim*, *ōim*, *ōiium*, etc.

The stem **ha-* (< **sm̥-*) is found in YAv. *hakərᵊṯ*, OP *hakaram* 'once'.

The ordinals are Av. *fratəma-*.

'Two' and 'both'
'Two' is expressed by the stems **dua-* and **dui-* (YAv. *bi°* in compounds): cardinal YAv. *duua*; ordinal OAv. *dᵃⁱbitiia-*, YAv. *bitiia-* (cf. *āṯbitim/āδbitim* 'a second time'), OP *duvitīya-* (*duvitı̆yam* 'for the second time'); YAv. *biš* 'twice'.

The words for 'both' are OAv. *ubā*, YAv. *uua*, OP *ubā* (gen.-dat. *ubānām*); YAv. *uuaēm* 'both' (OInd. *ubhayam*).

YAv. *duua* and *uua* (i.e., *dúya*, *úya*) have nom.-acc. masc. YAv. *duua*, *uua*, fem., neut. OAv. *ubē*, YAv. *duiie*, *duuaē°*, *uiie*; dat.-abl.-inst. *duuaēⁱbiia*, and gen. *duuaiiå*, *uuaiiå*.

'Three'
The stem is *θri-* (YAv. *θri°* in compounds), whence the cardinal nom. masc. *θrāiiō* (acc. *θrı̆š*, gen. *θraiiąm*, dat.-abl. *θribiiō*), fem. *tišrō* (gen. *tišrąm*, *tišranąm*), neut. *θrī*; the ordinal is Av. *θritiia-*, OP *çitı̆yam* 'for the third time'; YAv. *θriš* 'thrice'.

'Four'

The stem is *čaθβar-/catur-* (YAv. *caθru°* in compounds), whence the cardinal nom. masc. *caθβārō* (acc. *caturā*, gen. *caturam*), fem. *cataŋrō*, neut. *catura*; the ordinal is YAv. *tū̆ⁱriia-* (*āxtū̆ⁱrim* 'a fourth time'); YAv. *caθruš* 'four times'.

The remaining cardinals

The numerals 'five' to 'ten': *paṇca, xšuuaš, hapta, ašta, nauua, dasa*, have thematic gen. forms (*paṇcanąm, nauuanąm, dasanąm*).

Most of the numerals 'eleven' to 'nineteen' are known only from the ordinals, which were identical with the cardinals: *aēuuandasa-, duuadasa-, θridasa-, caθrudasa-, paṇcadasa-, xšuuaš.dasa-, hapta.dasa-, ašta.dasa-, nauua.dasa-*.

'Twenty' is *vī̆saⁱti*.

'Thirty' to 'fifty' are compounded with *°satəm*: *θrisatəm, caθβar°satəm, paṇcāsatəm*.

'Sixty' to 'ninety' are feminine *ti*-stems: *xšuuašti-, haptāⁱti-, aštāⁱti-, nauuaⁱti-*.

'Hundred' and 'thousand' are neuter *a*-stems, *sata-, hazaŋra-*: sg. *satəm, hazaŋrəm*, dual *duiie saⁱte, duiie hazaŋre*, with mixed plural forms: *tišrō sata, caθβārō sata, nauua hazaŋra*, etc.

Compounded numerals are represented by *paṇcāca vīsaⁱti* '25', *θraiiasca θrisąsca* '33', *paṇcāca haptāⁱti-* '75', *nauuaca nauuaⁱti* '99'.

Higher numerals: *duiie nauuaⁱti* '180', *nauuaca . . . nauuaⁱtišca nauuaca sata nauuaca hazaŋra nauuasə̄sca baēuuąn* '999,999' (the highest Avestan number).

Derived numerals

The ordinals of 'four', 'five', and 'six' are characterized by the root vowel *u*: *tū̆ⁱriia-, puxδa-, xštuua-*. 'Seventh' has the formant *-θa-*: *haptaθa-*; 'fifth' and 'eighth' to 'tenth' have *-ma-*: *paṇcama-, aštəma-, naoma-, dasəma-*; 'eleventh' to 'nineteenth' have the formant *-a-*, making them identical with the ordinals (see above). 'Twenty' and 'thirty' have the superlative suffix *-təma-*: *vī̆sąstəma-, θrisastəma-*.

Multiplicatives ('times', '-fold') have various formations ('once' to 'four times', see above): the forms *biš* and *θriš* may receive an additional formant *-u̯at*: *bižuuaṱ, θrižuuaṱ*; 'six/nine times' have a formant *-aiia*: *xšuuažaiia, naomaiia*; the tens have a formant *-u̯å* (*-u̯əm*) '-fold': *vī̆saⁱtiuuå, θrisaθβå, θrisataθβəm, caθβar°saθβå, paṇcasaθβå, xšuuaštiuuå, haptaⁱθiuuå, aštaⁱθiuuå, nauuaⁱtiuuå*. The form *nauuasə̄s°* (cf. OInd. *°-śaḥ*) is used in *nauuasə̄sca baēuuąn* '90,000'. Higher numbers: *satāiiuš, hazaŋrāiš, baēuuarōiš*.

The '-th time' is formed with the prefix *ā-*: *āṱbiti̇m/āδbiti̇m, āθriti̇m, āxtū̆ⁱri̇m*.

Fractions are made with the formant *-hu̯a-/-šu̯a-*: *θrišuua-, caθrušuua-, paŋtaŋ'ʰa-, haptahuua-, aštahuua-*. The same formation was used in Old Persian, as attested in Elamite texts: *ši-iš-maš* = **çišuua-*, *ṣa-iš-šu-iš-ma* = **čaçušuua-*, *aš-du-maš* = **aštauua-*, etc. (Hoffmann 1965).

3.8. Derived nominals

Words can be derived in a variety of manners: by prefixes and suffixes and by composition, of which the following is a sample.

3.8.1. Suffixes

Several suffixes have been discussed above, e.g., *-ti-* for action nouns (see infinitives, §2.3.11), the suffixes making participles of necessity, the suffixes used to derive number words, the suffixes making stem forms in general, and others. Among the more common, even productive, Old Iranian suffixes are the following:

-a-

Among the many uses of this suffix (the thematic vowel), one is to make adjectives from nouns (including derived nouns and compounds), often accompanied by lengthened (or full) grade of the first syllable of the noun; when the first syllable has a long vowel, the adjective will be identical with the noun from which it is derived:

Av. *maniiauua-* 'belonging to the world of thought' < *maniiu-*; *narauua-* 'son/descendant of Naru'; *haoząθβa-* 'the fact of being from a good lineage' < *huzaṇtu-* 'of good lineage'; *āpa-* 'waterlogged' < *ắp-* 'water', *anāpa-* 'waterless'; *upaⁱri-z⁽ᵊ⁾ma-* 'living upon the earth' < *zam-* 'earth'; *hazaŋrō.zima-* < *ziiam-* 'winter' 'space of a thousand years';

OP *ʰuvāipašiya-* 'own' < *ʰuvaipašiya-* 'self'; *mārgava-* 'person from Margiana' < *margu-* 'Margiana'; *pārsa* 'Persian' < *pārsa* 'Persia'.

-na-, -ana-

This suffix produces various kinds of nouns and adjectives from roots:

Av. *yasna-* 'sacrifice' < √yaz 'sacrifice'; *frašna-* 'question' < √fras 'ask'; *xᵛafna-* 'sleep' < √xᵛap 'sleep'; °*δana-*, OP °*dāna-* 'depository, container' < √dā 'place'; °*stāna-*, OP *stāna-* 'place (for . . .)' < √stā 'stand';—YAv. *haṇjamana-* 'assembly, gathering' < *ham* + √gam/jam 'come together'; *vaŋhana-* 'dress' < √vah 'wear', *maēθana-* 'dwelling' < √maēθ 'dwell'; *raocana-* 'window' < √raok/raoc 'shine'; *pacina-* 'cooked meal' < √pak/pac 'cook';

OP *hamarana-* 'battle' < *ham* + √ar 'clash'; *draujana-* 'lier, deceiver' < √draug/drauj 'lie, deceive'; *parīyana-* < **pariyayana-*(?) < *pari* + √ai 'go about'; *āvahana-* 'settlement, town' < *ā* + √vah 'inhabit'; *parana-* in *paranam* 'before, formerly' < *paraʰ* 'before'(?).

-i-, -i̯a-

The suffix *-i-* and its thematicized form *-i̯a-* are also used to form adjectives denoting various kinds of appurtenance, notably geographical; they are often accompanied by lengthened grade in the first syllable:

YAv. *āhū̆ⁱri-* 'pertaining to / belonging to Ahura (Mazdā)' < *ahura-* (*mazdā-*); *hāuuani-* '(time of day) pertaining to the haoma pressing' < *hauuana-* 'haoma pressing, mortar'; *vārᵊθraɣni-* 'victorious' < *vᵊrᵊθraɣna-* 'victory, god of victory'; *māzdaiiasni-* 'belonging to the Mazdaiiasnians' < *mazdaiiasna-*; *aⁱβimiθri-* 'somebody acting against a contract'; *haomiia-*

'related to the haoma'; *nmāniia-* 'pertaining to the home' < *nmāna-*; *vīsiia-* 'pertaining to the town' < *vīs-*; *xšaθriia-* 'in command' < *xšaθra-* 'royal command'; *raθβiia-* 'according to the *ratu*'; *tū̆ⁱriia-* 'Turian(?)'; *hupaθmaniia-* 'the fact of having good flights'; *vīspō.bāmiia-* 'being all light';

OP *yāuʰmani-* 'being in control(?)' < **yauʰman-* 'harnessing(?)' < √*yauk* 'harness'; *bāgayādi-*, month name: '(month) devoted to sacrifices to the god' < *baga-* + **yāda-*; *nāviya-* (YAv. *nāuuaiia-*) 'deep' (lit., needing a boat to cross?) < *nāu-* 'boat'; *māniya-* '(servant?) belonging to one's house'; *haᵐmiçiya-* 'conspirator' < **ham-miça-* 'having the same' *miθra* "contract"'; *θanuvaniya-* 'connected with/using a bow' < **θanuvan-* 'bow'; *xšāyaθiya-* < **xšayaθa-* 'the wielding of power' < √*xšai* 'to be in power'; *agriya-* 'foremost' < **agra-* 'tip(?)'; *aθuriya-* 'Assyrian' < *aθurā-* 'Assyria', *haxāmanišiya-* 'Achaemenid' < *haxāmaniša-* 'Achaemenes'; with *k* > *c* before the suffix: *maciya-* < *maka-* 'Makran', *ākaufaciya-* 'mountain-dwellers' < **ākaufaka-*.

A special use of the suffix *-i-* is to denote the master of something, somebody in charge of, owner of: OAv. *dạmi-*, the one in charge of, the one holding the *dāman-* the (cosmic) 'nets, fabrics(?)'; YAv. *uštrō.stāni-* 'somebody in charge of, owner of the camel stall (*uštrō.stāna-*)'; *pasuš.hasti-* 'somebody in charge of, owner of the sheep pen (*pasuš.hasta-*)'.

The suffix *-i-* is also used to make patronymics: *zaraθuštri-* 'son of Zarathustra' < *zaraθuštra-*, beside *-ā̆na-*, *-āni-*: YAv. *jāmāspana-* < *jāmāspa-*; *āθβiiāni-* < **āθβiia-* (OInd. *āptya-*) (Schmitt 2002).

-ka-, -aka-, -kā-

This is the most productive suffix in both Indic and Iranian, but is still relatively rare in Avestan and Old Persian:

YAv. *jaⁱnikā-* < *jaⁱnī-* 'woman'; *mašiiāka-* > *mašiia-* 'man, mortal'; *pasuka-* 'sheep and goats' < *pasu-*; *nāⁱrikā-* < *nāⁱrī-* 'woman'; *jahikā-* 'whore' < *jahī-*; with compounds: Av. *humaiiaka-* proper name < *humaiiā-*, *apərənāiiuka-* = *apərənāiiu-* 'not yet adult'; used of demonic beings: *əuuərəzikā-* 'producing nothing (good)' (V. 18.30, etc.); *niuuaiiaka nipašnaka apa.skaraka apa. xraosaka* '(libations) to be 'woe'd down, to be (ground) under the heels, to be skreeched back(?), to be howled back(?)' (Yt. 5.95);

OP *vazạrka-* < **vazar* 'greatness' (cf. *vašnā* 'by the greatness'); *ặrštika-*, *ʰuặrštika-* '(good) spearman' < **ạršti-* 'spear'; *marīka-* 'young man' < **mariya-*; *baⁿdaka-* 'bondsman' < **banda-* 'bond'; *anāmaka-*, month name < *anāman-* 'nameless'; *kạrnuvaka-* 'workman, artisan' (< *kạrnau-*, present stem, 'do, make').

-tāt- feminine

This is a productive suffix making abstract nouns from adjectives. It is also used to "quote" or refer to words. There are no examples in Old Persian, where it may have been replaced by *-tā-* (OP *ạrštā-* ~ Av. *arštāt-*):

Av. *haᵘruuatāt-* 'wholeness' < *haᵘruua-*; *uparatāt-* 'superiority' < *upara-*; OAv. *kəuuitāt-* 'the word/title of *kauui* 'poet'; *auuaētāt-* 'the word *auuōi* 'woe!''; YAv. *yauuaētāt-* 'that which is *yauuaē* 'forever', eternity'; *ⁱriθiiạstāt-* 'the fact of being *ⁱriθiiaṇt-* 'dying'.

3.8.2. Compounds

Compounds with prefixes:

Exclusively nominal prefixes include:

a- (*ə-*), *an-* 'not, non-, lacking', used to negate nouns and adjectives (including those made from verbs) and to make adjectives meaning 'lacking something': OAv. *adrujiiaṇt-* 'non-deceiving', YAv. *araθβiia-* 'not according to the (cosmic) models', *asrušti-* 'non-hearing', *anašauuan-* 'not orderly', *a- + vista-* 'found' > *əuuista-* 'unfound, not to be found', *əuuisti-* 'fact of not finding', *əuuīsəmna-* 'not to be found(?)', *aŋhaošəmna-* 'not drying out', *əuuiδuuah-* 'ignorant', *afrataṭ.kušī-* 'not yet flowing forth', *akarana-* 'endless, unlimited', *anaγra-* 'without beginning'.

hu- (Av. also *xᵛ-*, OP *ʰuv-*) 'good' and *duš-*, *duž-* 'bad, evil': Av. *hušiti-*, *dušiti-* (< °*-šiti-*) 'good/bad dwelling'; *xᵛīti-*, *dužiti-* (< *duš-iti-*) 'good (easy)/ bad (difficult) going, comfort/discomfort'; *hūⁱti-* < **hu-uti-* 'somebody whose weaving is good, artisan', *hudāh-*, *duždāh-* 'giving good/bad gifts' (< °*daʾah-*); *huxšaθra-*, *dušᵊ.xšaθra-* 'having good/bad command'; *humanah-*, *dužmanah-* 'thinking good/bad thoughts'; *huraoδa-* 'beautiful' < *raoδa-* 'growth, stature'; *humata- hūxta- huuaršta-* 'well thought, spoken, done';— OP *ʰuv-asa-* 'having good horses', *ʰuv-asabāra-* 'good horseman'; *dušiyāra-* (cf. YAv. *dužiiāriia-*) 'bad season, famine'.

Preverbs used as prefixes typically have slightly different meanings from those of the preverbs; compare:

apa 'in the back, backward' (preverb: 'back, backward'): *apakauua-* 'with hump in the back, humpback', *apazadah-* 'with backward buttocks, flat-assed'

fra 'in front' (preverb: 'forward, forth'): *frabāzu-* '(the length of) the arm held forward', *frašnu-* 'with knees jutting out, knob-kneed', *frakauua-* 'hump-chested', *fraiiara-* 'morning'

vī 'to the side(s), away' (preverb: 'to the sides, far and wide'): *vī.bāzu-* '(the length of) the arms held to out the sides', *vī.āpa-* 'from which the water has gone away, waterless', *vīdaēuua-* 'keeping the *daēuua*s away', *vī.xrūmaṇt-* '(a blow) that causes blood to flow to all sides'

Other compounds as well as their individual elements can be made from all kinds of words (nouns, adjectives, adverbs, and other compounds). If one member of the compound is a word that normally contains two parts (*ahura- mazdā-*, etc.), only one part can be used in the compound, e.g., *ahuraδāta-*, *mazdaδāta-* 'established ('created') by Ahura Mazdā'.

Occasionally, however, we find compounds consisting of more than two members: YAv. *frādaṭ.vīspạm.hujiiāⁱti-* '(the *ratu*) called "the one who furthers all good living"', *druxš.vīdruxš* 'who is the most lie-dispelling for the lie', *draoγō.vāxš.draojišta-* 'who belies the lying word the most', and, especially, names of texts, e.g., *xšmāuuiia.gə̄uš.uruuā- hāⁱti-* 'the section beginning with *xšmāuuiia gə̄uš uruuā*' (= Y 29).

The final vowel of the first member usually becomes *ō*, whether it is an *a-*, *ā-*, or *an-*stem (*daēuuō.dāta-* 'established by *daēuua*s'; *daēnō.dis-* < *daēnā-* 'showing (the path) to the *daēnā*'; *zruuō.dāta-* < *zruuan-*) 'estab-

lished by/in time') or an invariable in *-a* (*hupō.busta-* < *upa* 'well-scented'; *haδō.zāta-* < *haδa* 'born together with > sibling'; *haptō.karšuuairī-* < *hapta* 'belonging to the seven continents').

Nouns as second members of compounds are sometimes in the zero grade, e.g., *frādat̰.fšu-* < *pasu-* 'cattle-furthering'; *daršidru-* < *dāⁱru-* 'having a firm wooden club'; *ərᵊduuafšnī-* < *fštāna-* 'having perky breasts'; *darᵊgāiiu-* < *°Hi̯u-* < *āiiu-* 'long-lived'; *spitāma-* (3 syllables) < *°Hma-* < *ama-* 'having swollen power(?)'.

Some adjectives use an *i*-stem as the first member of a compound, e.g., *xšuuiβra-*: *xšuuiβi.išu-* 'having vibrant arrows'; *tiɣra-*: *tiži.aršti-* 'having sharp spears'; *jafra-*: *jaⁱβi.vafra-* 'with deep snow'; *namra-*: *nə̨mi.ə̨su-* 'having soft shoots'; *bərᵊzaṇt-*: *bərᵊzi.gāθra-* 'singing loud songs'; **xᵛanaṇt-*: *xᵛaⁱni.raθa-* 'having singing wheels'.

The first member of a compound is often in a case form:

nom.: YAv. *afš.ciθra-*, *ātarš.ciθra-* 'containing the seed of water/fire', *aβᵊždāna-* (< *āfš-d°*) 'being containers of water' (Y 42.2), *kərᵊfš.xᵛar-* 'corpse-eater, scavenger', *druxš.manah-* 'having deception in one's thought';

acc.: OAv. *vərᵊθrə̄m.jan-* 'obstruction-smasher', *ahūm.biš-* 'world-healer', YAv. *vīrə̨njan-* 'man-smasher' < *vīrə̨m + jan-*; *ašə̨m.stut-* 'praising Order'; *nasūm.kərᵊt-* 'corpse-cutter';

adverbial acc.: *darᵊɣə̨m.jīti-* 'long life';

gen. *drujas.kanā-* 'the den of the Lie', *z⁽ᵊ⁾mas.ciθra-* 'whose seed is in/from the earth';

dat.: *yauuaējī-*, *yauuaēsū-* 'forever living, forever vitalizing';

loc.: *bərᵊzi.rāz-* 'ruling on high'; *armaē.šad-* 'sitting in peace'; *maⁱδiiōi.šad-* 'sitting in the middle'; *raθaēštā-* 'who stands on a chariot, warrior'; *dūraēdərᵊs-* 'who sees far into the distance'.

3.8.3. "Open" compounds

A few combinations of independent words in Avestan correspond to compounds in Old Indic and are therefore commonly classified as compounds in Avestan, as well, but are called "open" because the terms are not formally joined.

Open dvandvas

These consist of two words in the dual. Their nature as compounds is revealed by the fact that each member of the *dvandva* can consist of only one word: OAv. *gāuuā azī* 'a bull and a (fertile) cow' (rather than: 'two fertile cows'); YAv. *miθra ahura* 'Miθra and Ahura (Mazdā)', *pasu vira* 'cattle and men', *āpa uruuaire* 'water and plants', *saŋhauuāci arᵊnauuāci* 'the two (sisters) Saŋhauuācī and Arnauuācī', *ahuna *aⁱriiamana* 'the (prayers) Ahuna (Vairiia) and (Ā) Airiiama (Išiiō)', *aspa daēnu* 'a stallion and his mare(?)'.

Repeated words

The *āmreḍita* compounds are adverbial phrases consisting of repeated words: OAv. *narə̄m narə̄m* 'man for man'; YAv. *nmāne nmāne* 'in house for house'.

Sigla and abbreviations

°	part of compound or before enclitic (e.g., °*dru-* in *darši-dru-*, *drao*° in *draoca*)
Av.	Avestan (Young and Old)
FO	*Frahang ī ōīm*
IIr.	Indo-Iranian
Ir.	Iranian
MPers.	Middle Persian
OAv.	Old Avestan
OYAv.	Old and Young Avestan
OInd.	Old Indic (especially Rigvedic)
OP	Old Persian
V	*Videvdad*
Y	*Yasna*
YAv.	Young Avestan
Yt.	*Yašt*

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Note on tables: Since the Avestan corpus is so deficient, there is no good way to present the Avestan grammar in tables of actual forms. If one tries to make up forms, one is soon confronted with uncertainties. These tables, therefore, contain only attested forms, but not *all* attested forms. Many forms are also cited in the text above.

Table 1: Ablaut

	zero grade: -C	full grade: aC/Ca	lengthened grade: āC/Cā
Av.	*h*-əṇti, s-tā, z-dī, Ø-mahi	*ah*-mi, *as*-ti	*åŋh*-a
	ux-ta-	*vac*-	*vāx*-/*vāc*-
	da-δ-ən, da-*s*-ta	da-δā-mi (< -daH-)	
OP	*h*-aⁿtiy	*aʰ*-miy, *as*-tiy	

	i	*ai*	*āi/āy*
Av.	gaⁱr-*i*-š; °*i*-ta-	gar-*ōi*-š; *āe*-ⁱti	gar-*a*
OP	cišp-*i*-š; °*i*-tā	cišp-*ai*-š; *ai*-tiy	

	u	*au*	*āu*
Av.	xšn*u*-ta-	xšn*ao*š-	xšn*āu*-š
	kər°-n*u*-	kər°-n*au*-, kər°-n*auu*-a-	
	gāt-*u*-	gāt-*ao*-š, gāt-*uuō*	
OP	°*dahay*-*u*-m	dahạy-*au*-š	dahạy-*āu*-š, dahạy-*āv*-a
	dur*ux*-ta-; gāθ-*u*-	dr*au*ga-; gāθ-*av*-ā	

	n, a (< ṇ)	*an*	*ān*
Av.	aš*n*-ō		as*ān*-ō
	j*a*-ⁱδi	j*an*-aṯ	
OP	j*a*-diy	a-j*an*-am	

	ā (< ṇH)	*nā (<naH)*	
Av.	*ā*d-ra- (< *ṇHd-ra-)	*nā*ⁱd-iiah- (< *naHd-ịah-)	

	m, a (<ṃ)	*am*	*ām*
Av.	°*gm*-aⁱti-	j*ə̄m*-, j*im*-a- (< jam-)	j*ām*-aiia-
OP	han-g*m*-ata	ā-j*am*-iyā	

	r, ṛ	*ar*	*ār*
Av.	b*ər*°-ta-	b*ar*-a-	b*ār*-aiia-
OP	k*ạr*-ta, ca-xr-iyā	°k*ar*-a, c*ar*-tanaiy	u-c*ār*-am;
	piça (< *piθrah)		pit-*ā*, framā-t*ā*ram

	ar (< ṛH)	*ar, rā (< arH, raH)*	
Av.	d*ar*°ya-	dr*ā*j-ah-	
OP	d*ar*ga-		

Table 2: Alternations of stops

			Spirant:	
	Stop:		unvoiced	voiced
p:	√ap	ā*p*-ō	ā*f*-š	aⁱ*β*-iš
	√ptar	*p*-ᵃta	*f*-°δrōi	
b:	√dab	da*p*-ta		di*β*-ža-, daⁱ*uu*-iš
	√gamb		ja*f*-ra-,	jaⁱ*βi*-
			ja*f*-nu-	

Table 2: Alternations of stops (cont.)

		Stop:	Spirant: unvoiced	Spirant: voiced	Sibilant:	Nothing:
t:	√ptar	pᵃt-a	piθ-re	fᵊδ-rōi	OP piça	
	-tu̯a	varš-tuua-	mą-θβa-	vax-ᵊδβa-		
	t(u)u̯-	tuuə̄m,	θβą̄m			
		OP tuvam	OP θᵘvām			
		OP mạrtiya-			mašiia-	
		mərᵊ-ta-	mərᵊ-θiiu-		OP °mạr-šiyu-	
	bərᵊt	°bərᵊ-t-əm				°bərᵊ-s
d:	√dā	dā-t̡	da-θ-at̡	da-δā-mi	da-z-di	
					da-s-ta	
	√band	band-aiia-			Av., OP bas-ta-	

		Stop:	Spirant: unvoiced	Spirant: voiced	Palatal:	Sibilant:	Nothing:
k:	√vak		vāx-š	vāɣ-žⁱbiš	vāc-im		
	√tank	tak-aθra-	tax-ma-		tąc-išta-		
	-ank-	parō.k-, parāgᵊt̡			niiåṇc-ō	tąṣ̌-iiah- apaš-ī-	parą-š
g:	√aog	aog-ᵊmaide	aox-ta		aoj-aite		
	√aog	aog-arᵊ		uɣ-ra-	aoj-ah-		
	√draog		drux-š	draoɣ-a-	druj-im	druž-a-	druu-aṇt-
		OP draug-a-	dᵘrux-ta-		dᵘruj-iya-		

Table 3. Thematic verbs: present indicative

	OAv.	YAv.	OP
Active			
sg.			
1	yāsā, auuāmī	°zbaiia, yāsāmi; ufiiemi	°barāmiy
2	°vaēnahī	pərᵊsahi; jaiδiiehi	
3	baraⁱtī; dābaiieⁱtī	baxšaⁱti; uxšiieⁱti	°baratiy
du.			
3		baratō; yuⁱδiiaθō	
pl.			
1	sə̄ŋhāmahī	yāsāmahi; fraēšiiāmahi, zbaiiamahi	θahạyāmahạ y
2	išaθā		
3	išəṇtī; vanaⁱṇtī	°marəṇti, taciṇti; jaⁱδiieiṇti, vərᵊ̃ziṇti	baraⁿtiy
Middle			
sg.			
1		yeze (< *i̯azai), °iiese (< *i̯asai)	maniyaiy
2		vašaṛhe; xšaiiehe	
3	yazaⁱtē	yazaⁱte, fraδātaē°; maniiete	yadataiy
du.			
3	pərᵊsaētē	carōiθe; °zaiiōiθe	
pl.			
1	yazamaⁱdē, vīsāmadaē°	yazamaⁱde; maniiāmaⁱde	
2	dīdraɣžō.duiiē	°caraθβe	
3	frādəṇtē, haciṇtē; maniieṇtē	yazəṇte, haciṇte	

Table 4. Thematic verbs: present injunctive and imperfect

	OAv.	YAv.	OP
Active			
sg.			
1	rādəm(?)	°barəm; bərᵊjaēm; baom	abaram
2	jasō; uxšiiō	apərᵊsō, jasō; dāesaiiō	°gaudaya
3	jasaṯ; vərᵊziiaṯ	auuaēnaṯ, baraṯ, jaⁱōiiaṯ	abara
du.			
3		jasatəm; ta^uruuaiiatəm	ajīvatam
pl.			
1	ta^uruuaiiāmā		°atarayāmā
2		ta^uruuaiiata	
3	baṇaiiən	tacin; uxšin, °ōāraiiən, baon	abaraⁿ
Middle			
sg.			
1		aguze; °baⁱre	amaniyaiy
2		°θβərᵊsaŋha; °zaiiaŋha	
3	maniiātā	adauuata, barata; maniiata	
du.			
3	°jasaētəm	°caēšaētəm	
pl.			
3	°duuārəṇtā; maniiaṇtā	yazəṇta, fraorᵊciṇta; jaⁱōiiaṇta; adāuṇta	agaubaⁿtā

Table 5. Thematic verbs: present subjunctive

	OAv.	YAv.	OP
Active			
sg.			
1	zbaiiā, sə̄ŋghānī; ufiiānī	azāni, jasāni; dāesaiieni	
2		barāhi, jasāi; °saocaiiāhi	vaināhạy
3	išāṯ	baraṯ, jasāⁱti; ⁱriθiiāṯ	
pl.			
1		dāesaiiama	
2	azāθā		
3	išåṇtī; vərᵊziiaṇ	°baraṇ, baråṇti; °uxšiiaṇ, jaⁱōiiåṇti	
Middle			
sg.			
1	isāi	yazāi, yazāne; hācaiiene	kunavānaiy
2		pərᵊsåńhe; °pāraiiåńhe	maniyāhạy
3		yazāⁱte; paⁱōiiāⁱte	yadātaiy
pl.			
1	isāmaⁱdē		
3	hacåṇtē	yazåṇte; vaziiåṇte	

Table 6. Thematic verbs: present/preterital optative

	OAv.	YAv.	OP
Active			
sg.			
2	rapōiš	barōiš; °δāraiiōiš; auuaēnōiš	
3	jasōiṯ	barōiṯ; zbaiiōiṯ; auuarōiṯ (< bara-)	kạriyaiš (passive) (post-OP akunaiy)
du.			
3		°caraiiatəm	
pl.			
1		jasaēma	
3		pacaiiən; °darᵊzaiiaēn, °snāδaiiən	
Middle			
sg.			
1	isōiiā	haxšaiia	
2		yazaēša; zbaiiaēša	yadaišā
3	varᵊdaiiaētā	azaēta; °snaiiaētā; °δaxšaiiaētā	
pl.			
1	vāurōimaⁱdī	°vaēnōimaⁱdī; buⁱδiiōimaⁱδe	
2		rāmōiδβəm	
3		maēzaiiaṇta; °snaiiaiiaṇta	akunavayaⁿtā

Table 7. Thematic verbs: present imperative

	OAv.	YAv.	OP
sg.			
2	pərᵊsā	jasa; nase, °uruuīse (< -si̯ā)	pạrsā
3	vərᵊziiō.tū	hacatu; mitaiiatu	baratuv
pl.			
2	jasatā	duuarata; dāiiata	
3		patəṇtu, °uuāδaiiaṇtu	
Middle			
sg.			
2		yāsaŋᵛha; varəδaiiaŋᵛha	°payaʰuvā
3	vərᵊziiātạm	vərᵊziiatạm	vạrnavatām
pl.			
2	vaēdō.dūm	dāraiiaδβəm	
3	°xraosəṇtạm		

Table 8. Athematic verbs: present indicative, root stems

	OAv.	YAv.	OP
Active			
sg.			
1	ahmī, vasᵊmī; mraomī, staomī	ahmi, staomi	aʰmiy
2	ahī, vašī, hafšī	ahi, vaši	ahay
3	astī, vaštī, haptī, sāstī, aēⁱtī, šaēⁱtī	asti, jaⁱn̥ti, aēⁱti, staoⁱti	astiy, janⁿtiy, aitiy
du.			
1	usuuahī		
3		stō, °mrūtō	
pl.			
1	mahī, usᵊ̄mahī	mahi, usmahi	aʰmahay
2	stā, uštā		
3	hən̥tī; yeⁱn̥tī, šiieⁱn̥tī	hən̥ti	hanⁿtiy
Middle			
sg.			
1	aojōi, gərᵊzōi; °mruiiē	mruiie, °γne	
2	°pår̄hē		
3	vastē; isē(?)	°γne, mruiie, mrūⁱte, āste, saēte, vaste	
pl.			
1	aogᵊmadaē°	mrūmaⁱde	
3		*°γnāⁱre, mruuāⁱre, åŋhāⁱre, sōire/saēre, aojaⁱte, van̥haⁱte	

Table 9. Athematic verbs: present indicative, reduplicated and *n*-stems

	OAv.	YAv.	OP
Active			
sg.			
1	daδąmi, zaozaomī	daδąmi, °frǐnāmi, kərᵊnaomi, cinahmi	
2		daδāhi, kərᵊnŭši	
3	dadāⁱtī; hunāⁱtī; vīnastī	daδāⁱti, hiš.haxti, °grəβnāⁱti, kərᵊnaoⁱti, vinasti	kunautiy
pl.			
1	dadᵊmahī; huuᵃmahī; friiᵃmahī; cīšmahī	dąnmahi (< dadm-)	
3	dadaⁱtī	(thematic vindən̥ti)	
Middle			
sg.			
1	°dadē, °iiōi; vərᵊnē	pərᵊne (¹pərᵊnā-)	
3	dastē, dazdē; vərᵊn̥tē	dazde, daste, °zūzušte, °gərᵊn̥te, viste	
du.			
3		zazāⁱte	
pl.			
1	dadəmaⁱdē	daδᵊmaⁱde, cīšmaⁱde	
2	mərᵊŋduiiē		
3	mərᵊn̥caⁱtē		

Table 10. Athematic verbs: present injunctive, root stems

	OAv.	YAv.	OP
Active			
sg.			
1		mraom	
2	mraoš		
3	as, °jə̄n (jan-), tāšt, mraoṯ	ās, °āmraoṯ, mraoṯ	°aja^n, āiš
du.			
1	ahuuā		
3		°āitəm	
pl.			
2	mraotā		
3		°āin (< *āii̯an)	āha^n, °ajana^n
Middle			
sg.			
1	aojī		
2	aoɣžā		
3	aogə̄dā, gərə̄ždā	°āmrūta, aoxta	°ajatā
pl.			
3			āha^{n}tā, āya^{n}tā

Table 11. Athematic verbs: present injunctive, reduplicated and *n*-stems

	OAv.	YAv.	OP
Active			
sg.			
1		daδ̨m, °diδaēm (< -aiiam)	(post-OP akunā[m])
2	minaš		
3	^{u}rūraost, dīdạs, dadāṯ, cinaoṯ, cinas	ādadaṯ, °akərə̆naoṯ, daδāṯ, kərə̆naoṯ	adadā, adānā, akunauš; (post-OP akunaš, akun^a)
pl.			
2	də̆bə̆naotā	°srinaota	
3	jīgərə̆zaṯ, dadaṯ, mīzən	kərə̆nāun	akunava, akunavaš
Middle			
sg.			
3		dasta, hunūta, °vərə̆ṇta	aku^{n}tā
pl.			
3	vərə̆nātā		(thematic akunava^{n}tā)

Table 12. Athematic verbs: present imperative

	OAv.	YAv.	OP
Active			
sg.			
2	zdī (< s-di), idī, cīždī	ja^{i}δi, mrŭ^{i}δi, stŭ^{i}δi, dazdi, kərə̆nŭ^{i}δi	°idiy, jadiy
3	astū, sāstū, mraotū, dadātū	astu, jaṇtu (jasa- √gam), mraotu	*astuv, dadātuv, kunautuv

Table 12. Athematic verbs: present imperative (cont.)

pl.			
2	°zānᵃtā	staota, nīsta, dasta	°itā, jatā
3	hǝṇtū	*hǝṇtu, °iiaṇtu, °frīnǝṇtu	

Middle			
sg.			
2	dasuuā (< dad-su̯a)	dasuua	kuⁿšuvā
pl.			
2	sāzdūm, °idūm, °dazdūm		
3	jᵊ̄nᵊrạm, xrūnᵊrạm		

Table 13. Athematic verbs: present subjunctive

	OAv.	YAv.	OP
Active			
sg.			
1	aŋhā, aiienī	aŋha, °mrauua, janāni, kǝrᵊnauuāni, daθāni, aiieni, °mrauuāni	ahaniy
2		aŋhō, °mrauuāi, °daθō	āhạy (< *ahahi)
3	aŋhaṯ, vasaṯ, °aiiaṯ, mrauuaṯ, dadaṯ, aŋhaⁱtī, mrauuaⁱtī	aŋhaṯ, hunauuaṯ, daθaṯ, frīnāṯ; aŋhaⁱti (aŋhãⁱti)	ahatiy, *kunavātiy
pl.			
1	åŋhāmā	janāma, daθāma, viṇdāma	
3	aŋhǝn, dadǝn, zazǝṇtī, kǝrᵊnaon	aŋhǝn, daθǝn, kǝrᵊnaon, *aiieⁱṇti	
Middle			
sg.			
1	aojāi, šiiauuāi, frīnāi	°mrauuāne, kǝrᵊnauuāne	kunavānaiy
2	°iiaŋhā (√i̯ā)		
3	vǝrᵊnauuaⁱtē	ǝrᵊnauuataē°, daθaⁱte	kunavātaiy, vạrnavātaiy
pl.			
1		cinaθāmaide, hiščamaⁱdē	
3	dadǝṇtē	ǝrᵊnauuaṇte, vǝrᵊnauuaṇte	

Table 14. Athematic verbs: present/preterital optatative

	OAv.	YAv.	OP
Active			
sg.			
1	x́iiǝ̄m < (hi̯-)		
2	x́iiå	janiiå, mruiiå, daⁱθiiå, daⁱδı̌š, suˢrunuiiå, °stǝrᵊnuiiå	
3	usiiāṯ, mruiiāṯ, pāiiāṯ; sāhı̌ṯ, daⁱdı̌̄ṯ, mǝrạšiiāṯ (< mǝrᵊnc-i̯-)	hiiāṯ, daⁱδı̌ṯ, daⁱδiiāṯ, kǝrᵊnuiiāṯ, cı̌šiiāṯ	avājaniyā (< ava-ā-)
du.			
3		daⁱδı̌təm(?)	

Table 14. Athematic verbs: present/preterital optatative

pl.		
1	x́iiāmā	
2	x́iiātā	
3		hiiārᵊ

Middle		
sg.		
1		tanuiia
2		āhǐ̆ša, °mruuǐ̆ša, daⁱθǐ̆ša
3	daⁱdītā	aojǐ̆ta, °ɣnǐ̆ta, °mruuǐ̆ta, daⁱθǐ̆ta

Table 15. Aorist indicative and injunctive

	OAv.	YAv.	OP
Active			
sg.			
1	darəsəm (vaēna),[a] cōišəm (cinah-); °vaocim (mrao- √vak)		
2	då (dadā-), cōiš; dāiš (daēsaiia-); tašō (tāš-)	°uuaocō	
3	ə.vaocaṯ; dāṯ, cōišt, cōrəṯ (kərᵊnao-), dōrəšt (vaēna- √dars?), °jə̄n (jasa-, √gam); xšnāuš (√xšnao), dārəšt (vaēna- √dars?), sąs (saδaiia-), vąs (vana-); tašaṯ, vaocaṯ	vaxšt (uxšiia-), °uuaocaṯ;	adā̆ᵗ
du.			
1	duuaidī		
pl.			
1	dāmā; ə̄uuaocāmā	°uuaocāma	
2	dātā	cōišta (P. 25?), dāta	
3	dąn(?), gmən (jasa-), yūjən (yunag-); ståŋhaṯ (hišta-)		
Middle			
sg.			
1	cə̄uuišǐ (< *cōišǐ); frašī (pərᵊsa-), mə̄ŋ́hī (maniia-)	°rāhī (rāsa-)	adąršiy (dāraya-)
2	dåŋhā		
3	maṇtā, ciuuištā (< *cōiš-); fraštā, mąstā; gūšatā (gūš-)	°srīta (srinao-), θraošta (√θrao), varšta (vərᵊziia-); mąsta	
du.			
3	asruuātəm (sᵘrunao-)		
pl.			
1	amāhmaⁱdī (maniia-), varəmaⁱdī (vərᵊnā-)	°yaoxmaⁱde (yunag-)	
2	daduiiē		
3	dātā		

a. The corresponding present or root is given in parentheses.

Table 16. Aorist subjunctive

	OAv.	YAv.
Active		
sg.		
1	jimā (jasa-), darəsānī; dōišā, varəšā; vaocā, hanānī (hanaiia-)	buua; *jaŋhāṯ
2	dāhī	°frā (√par)
3	jimaⁱtī, jimaṯ, buuaṯ (bauua-), buuaⁱtī, dāṯ, dāⁱtī; naēšaṯ (naiia-), varəšaitī, və̄ŋhaṯ (vana-), jə̄ŋghati° (< jaŋ-h-; jasa); vaocāṯ, vīdāṯ (vinad-), vīdāⁱtī	darəsaṯ (FO 14?); ståŋhaⁱti, spåŋhāⁱti (spaiia-); vaocāṯ
du.		
3	jamaētē	
pl.		
1	dāmā; nāšāmā (ašnao-); vaocāmā	jimama, darəsāma, vaocāma
2	caiiaθā (cinao-), dātā	
3	°jimən, buuaⁱṇtī, daṇ; xšnaošən, varəšəṇtī, vaŋhən (vana-)	bun (< buuan); jaŋhəṇti
Middle		
sg.		
1	xsāi (kasa-), mə̄nāi, dānē; xšnaošāi, varəšāne, haxšāi, mə̄ŋhāi	°uuarāne; grəfšāne (grəβnā-)
2	dåńhē; råŋhaŋhōi (rāsa-)	
3		°dāⁱte, °varaⁱte
pl.		
3	ārəṇtē (ərᵊnao-), yaojaṇtē, dåṇtē	°δåṇte

Table 17. Aorist optatative

	OAv.	YAv.	OP
Active			
sg.			
1	diiąm		
2	—	jamiiå, dăiiå, buiiå	biyāʰ
3	diiāṯ, sax́iiāṯ (sə̄ŋha-); sīšōiṯ (sāh-)	°asiiāṯ (ašnao-), jamiiāṯ, buiiāṯ, vaⁱnĭ̄ṯ; °jaŋhōiṯ, zahīṯ (zazā-); vaocōiṯ	
pl.			
1	zaēmā (zazā-), vaocaēmā, hanaēmā	jamiiama, buiiama, nāšīma (ašnao-)	
3		jamiiąn, buiiąn, jamiiārᵊš, buiiārᵊš	
Middle			
sg.			
1	diiā		
2	dīšā	xšaēša, hanaēša	
3	xšaētā (xšaiia-)		

Table 18. Aorist Imperative

	OAv.	YAv.	OP
Active			
sg.			
2	dāⁱdī, gaⁱdī (jasa-), cǐždī; vaocā	dāⁱdī	
3	dātū, jaṇtū (jasa-)	pātū (pǎiia-), barᵊtu (bara-)	pātuv (paya-)
pl.			
2		dāiiata(?), buiiata	
3	scaṇtū (haca-)		
Middle			
sg.			
2	dāhuuā, kərᵊšuuā; frašuuā; gūšahuuā		
3	dąm, ucąm (mrao- √vak)	bərᵊtąm	
pl.			
2	θrāzdūm (θrāiia-); gūšōdūm		

Table 19. Perfect indicative

	OAv.	YAv.
Active		
sg.		
1		cikaēθa (cinaθ-), dādarəsa (vaēna-), diduuaēša (dᵃⁱbišiia-), °ᵘruraoδa (raoδa-)
2	dadāθā	dadǎθa, vauuaxδa (mrao- √vak)
3	tatašā, °nənāsā (nasiia-), hišāiiā (hiia-)	bauuara (bara-), buuāuua (bauua-), cakana (√kan), daδa, daδāra, hušxᵛafa (xᵛafsa-), tataša, vauuaca, viuuaēδa (vinad-), yaēša (aēšaiia-), yaiiata (yātaiia-)
du.		
3		yaētatarᵊ (yātaiia-), vaocātarē, vāuuarᵊzātarⁿ
pl.		
1	vaoxəmā	diduuišma, susruma
3	åŋharⁿ (ah-)	åŋharⁿ, dāδarᵊ, baβrarᵊ, bābuuarᵊ (bauua-), vaonarᵊ,
	cāxnarⁿ (√kan), vaonarⁿ (vana-)	ⁱrīriθarᵊ (ⁱriθiia-), °šastarᵊ (nišad-), cāxrarᵊ (kərᵊnao-)
Middle		
sg.		
1		susruiie (sᵘrunao-)
3	ārōi (ərᵊnao-), dādrē, pafrē (²pərᵊnā-), vāuuarᵊzōi	daⁱδe, mamne, vaoce, vaoze (vaza-), tuθruiie
du.		
3		mamnāite (maniia-)

Table 20. Pluperfect

	OAv.	YAv.
Active		
sg.		
3		jaɣmaṯ (or sbjv.)
pl.		
3	cikōitərᵊš	

Table 21. Perfect subjunctive

	OAv.	YAv.
Active		
sg.		
3		jaɣmaṯ (or plupf.), tatašaṯ
pl.		
2	vaorāzaθā	
3		iieiiąn
Middle		
sg.		
3		°pāfrāite

Table 22. Perfect optative

	YAv.	OP
Active		
sg.		
1	jaɣmiiąm (jasa-), daⁱδiiąm (diδaē-), °šušuiiąm (šauua-)	
3	åŋ́hāṯ (ah-), vaoniiāṯ (vana-), °hisiδiiāṯ (√saēd), °hazdiiāṯ (hiδa-)	caxriyāᵗ (kunau-)
du.		
3	åŋ́hāṯ.təm	
pl.		
3	daⁱδin, °baβriiąn, °saciiārᵊš (saca-)	
Middle		
pl.		
3	vaozirəm (vaza-)	

Table 23. *āda-, vaēda*

	Indicative OAv.	YAv.	Subjunctive OAv.	Optative YAv.	OAv.
sg.					
1	ādā, vaēdā	vaēθā°	vaēdā (-aˀā)		
2	vōistā			vaēθaṯ	
3	vaēdā	vaēδa			vīdiiāṯ
pl.					
3	ādarᵊ	ādarᵊ, *vīδarᵊ		vaēθəṇti	
Middle					
sg.					
3		āⁱδe			

Lists of cited verbs by present stems or root.

a-stems:

aēšaiia- 'seek', *auua-* 'help', *aza-* 'lead, drive', *bąnaiia-* 'sicken', *bara-* 'carry', *bauua-* 'become', *baxša-* 'distribute, give', *bərᵊjaiia-* 'strengthen(?)', *buⁱδiia-* 'become aware (of)', *caēša-* 'pile up(?)', *cara-* 'walk', *dāesaiia-* 'show', *dauua-* 'tell lies', *daxšaiia-* 'mark(?)', *dābaiia-* 'make deceive', *dāiia-* 'give', *dāraiia-* 'hold', *dᵃⁱbišiia-* 'harm', *darᵊzaiia-* 'chain', *dⁱ̆draɣža-* 'wish to hold', *duuǎra-* 'run', *fraēšiia-* (< *fra-išiia-*) 'send', *fraorᵊca-* (< *fra-uuᵊrᵊca-*) 'catch up (with)(?)', *frāda-* 'further', *gauba-* (mid.) 'call oneself', *gaudaya-* 'hide', *guza-* 'hide', *haca-* 'follow', *hanaiia-* 'gain', *haxša-* 'follow', *hācaiia-* 'make follow', *hiδa-* 'sit', *hiia-* 'tie', *hišta-* 'stand', *°iiasa-* (< √*yam*) 'take', *isa-* 'be able', *iša-* 'come', *jaⁱδiia-* 'ask for', *jasa-* (< √*gam/jam*) 'come', *jīva-* 'live', *kasa-* 'see', *maēza-* 'urinate', *maniia-*, *maniya-* 'think', *mara-* 'remember', *mitaiia-* 'dwell(?)', *naiia-* 'lead', *nasiia-* 'perish', *paca-* 'cook', *nišad-* 'sit', *paⁱδiia-* 'lie, fall', *pata-* 'fall', *pǎiia-*, *paya-* 'guard', *pāraiia-* 'help to pass', *pərᵊsa-* 'ask', *rapa-* 'support', *raoδa-* 'loose, leave out', *rāda-* 'direct(?)', *rāma-* 'rest', *rāsa-* 'give', *ⁱriθiia-* 'die', *ᵘruuⁱ̆šiia-* 'wring', *saca-* 'pass, go', *saδaiia-* 'seem', *saocaiia-* 'burn (trans.)', *sə̄ŋha-* 'announce', *taca-* 'run', *snāiia-* 'wash', *spaiia-* 'throw (away)', *šauua-* 'go', *taraya-* 'cross over', *taᵘruuaiia-* 'overcome', *θahaya-* 'be said', *θβᵊrᵊsa-* 'cut, fashion', *θrāiia-* 'protect', *ufiia-* 'weave', *uxšiia-* 'grow', *vaēda-* 'find', *vaēna-* 'see', *vana-* 'overcome', *varᵊdaiia-* 'make grow', *vaša-* 'move up and down', *vāδaiia-* 'lead', *vāura-* (< *ṷā-ṷr-*) '?', *vᵊrᵊziia-* 'work, act', *vⁱ̆sa-* 'be ready', *xšaiia-* (mid.) 'rule (over)', *yaza-*, *yada-* 'sacrifice (to)', *yātaiia-* 'put in order', *xraosa-* 'howl', *xᵛafsa-* 'sleep', *yāsa-* 'ask for', *yuⁱδiia-* 'fight', *zaiia-* 'be born', *zbaiia-* 'invoke'.

Root stems:

aē- (*ai-*)/*i-* 'go', *ah-/h-* 'be', *aog-* 'declare', *āh-* 'sit', *gᵊrᵊz-* 'complain', *gŭš-* 'listen', *hap-* 'seize', *jan-/ɣn-* 'smash', *mrao-/mru-* 'say', *naid-/nid-* 'blame, scorn', *saē-* 'lie', *sāh-* instruct', *stao-/stu-* 'praise' (see Vaan 2004), *šiiauu-* 'set in motion', *tāš-* 'fashion', *vah-* 'don, wear', *vas-/us-* 'wish'.

na-stems:

cinah-/cīš- 'assign', *cinaθ-* 'mark(?)', *mᵊrᵊnak-/mᵊrᵊŋk-* 'destroy', *minaz-/mīz-* (< *mįz-*) 'tend(?)', *vinad-/viṇd-* 'find', *yunag-/yuṇj-* 'yoke'.

nā-stems:

dānā- 'know, savoir', *frĭnā-/frĭn-* 'invite as guest-friend', *gᵊrᵊnā-/gᵊrᵊn-* 'welcome', *grəβnā-* 'take', *pᵊrᵊnā-/pᵊrᵊn-* '1. overcome; 2. fill' *vᵊrᵊnā-/vᵊrᵊn-* 'chose', *xrūnā-/xrūn-* 'bleed (trans.)', *zānā-/zān-* 'know, savoir'.

nao-stems:

ašnao- 'reach', *cinao-* 'collect', *dᵊbᵊnao-* 'deceive', *ᵊrᵊnao-* 'set in motion', *kᵊrᵊnao-/kᵊrᵊnu-,* *kunau-* 'do', *srinao-* 'lean', *stᵊrᵊnao-* 'spread', *tanao-* 'stretch', *vᵊrᵊnao-* 'cover(?)', *vᵊrnau-* (impers.) 'believe'.

Reduplicated stems:

dadā-/dad- 'give', *diδaē-/diδii-* 'see', *dīdᵊh-* 'learn(?)', *hiš.hak-/hišc-* 'follow', *jīgᵊrᵊz-* 'complain repeatedly', *hunā-/hun-* 'impel', *iia-* (*į̆a-* < √*yā*) 'ask

for', ᵘrūraod- 'howl', zaozao- 'call repeatedly', zazā-/zaz- 'leave behind', zūzuš- 'enjoy'.

Only perfect forms:
āt- 'say', vaēd- 'know'.

Roots without attested present stems:
√dars (pres. vaēna-, vaina-) 'see', √kan 'love', √par 'traverse', √saēd 'cut', √θrao 'assemble(?)', √xšnao 'favor'.

Table 24. Nouns and adjectives. *a*-stems

	OAv.	YAv.	OP
sg.			
N	ahurō, ciθrā, akas°	ahurō (-ras°), maⁱriiō, gaiiō, daēuuō	pārsa
V	ahurā	ahura, maⁱre	martiyā
A	ahurəm; paᵘruuīm, gaēm	ahurəm; maⁱrīm; gaēm, daē(uu)ūm	pārsam
NAnª	xšaθrəm, pauruuīm	nmānəm, haⁱθīm, hoᵘrum, vīdōiiūm	xšaçam
I (IAbl.)	sə̄nghā; xšaθrā	yasna, xᵛaēpaⁱθe	pārsā
D	ahurāi, ahurāi.ā	ahurāi	
A	zaošāṭ, vīrāaṭ°	nmānāṭ, xšaθrāδa	
G(GD)	ahurahiiā, spəṇtax̌iiā°; paᵘruiiehiiā, zaraθuštrahē	ahurahe, ašańhā°; maⁱriiehe, gaiiehe	pārsahạyā
L	sə̄ńhē, marᵊkaē°, šiiaoθᵃnōi, xᵛāθrōiiā	xšaθre, ahuⁱre, zastaiia	pārsaiy, dastayā
du.			
NVA	zastā, paᵘruiiē	ahura, gaoša	gaušā
NAn.	šiiaoθᵃnōi	šiiaoθne	
IDAbl.	zastōibiiā (them. pāδauue)	ahuraēⁱbiia, *gaošaēⁱβe	dastaibiyā
G	rānaiiå	(thematic pāδaiiå)	gaušāyā
L	zastaiiō, ubōiiō		
pl.			
NV	mašiiā, mašiiåŋhō; paᵘruiiē	yazata, yazatåŋhō, aⁱre	martiyā, aniyāhā
A	mašiiə̄ṇg, sə̄nghạs°	yazatə̄, yazatạs°, haomạ, daē(uu)ū	martiyā
NAn.	šiiaoθᵃnā	nmāna (fem. nmānå)	āyadanā
I (IAbl.)	mašiiāiš	zastāiš	martiyaibiš
DAbl.	marᵊtaēⁱbiiō, yasnōibiiō; dātōⁱbiias°	yazataēⁱbiiō	
G (GD)	yasnanạm	yazatanạm	martiyānām
L	mašiiaēšū	yazataēšu, yazataēšuua	mādaišuvā

a. NAn. = nominative-accusative neuter. Old Persian cases are in parenthesis: I (IAbl.) means the form is Av. instrumental, but OP instrumental-ablative.

a-stems: *ahura-* 'lord', *aka-* 'evil', *aⁱriia-* 'Aryan', *aša-* '(cosmic/ritual) order', *āyadana-* 'place of sacrifice', *ciθra-* 'luminous(?)', *dāta-* 'law', *gaoša-* (*gauša-*) 'ear', *haoma-*, *marᵃka-* 'destruction', *marᵊta-* 'mortal', *mašiia-*, *martiya-* 'man', *māda-* 'Median', *nmāna-* 'house', *pārsa-* 'Persia, Persian', *rāna-*

'thigh', *sə̄ŋgha-* 'announcement', *spəṇta-* 'life-giving', *vīra-* 'man', *šiiaoθ^na-* 'action, work', *uba-* 'both', *xšaθra-* (*xšaça-*) '(royal) command', *x^vāθra-* 'comfort', *yasna-* 'sacrifice', *yazata-* 'deity', *zaoša-* 'taste, pleasure', *zasta-* (*dasta-*) 'hand'; – *iia*-stems: *aniia-* (*aniya-*) 'other', *gaiia-* 'life', *gāiia-* 'step', *ha^iθiia-* 'real, true', *mašiia-* (*martiya-*) 'mortal man', *pa^uruuiia-* 'former, first', *x^vaēpa^iθiia-* 'own'; – *uua*-stems: *aēuua-* 'one', *daēuua-* 'demon', *gauua-* 'milk', *hauruua-* 'whole', *vīdaēuua-* 'discarding the demons'.

Table 25. Nouns and adjectives. Feminine *ā*- stems

	OAv.	YAv.	OP
sg.			
N	daēnā; pa^uruiiē	daēna; na^ire	hainā
V	bər^əxδē	daēne	
A	daēnąm	daēnąm	taumām
I (IAbl.)	daēnā, daēnaiiā	daēnaiia	haināyā
D	daēnaiiāi	daēnaiiāi, gaēθiiāi	
Abl.		daēnaiiāt̰, uruuaraiiāat̰°	
GAbl. (GD)	daēnaiiå	daēnaiiå(s°)	taumāyā
L	—	grīuuaiia	aθurāyā
du.			
NVA	ubē	uruua^ire	
IDAbl.	—	vaθβābiia	
G (GL)	—	nā^irikaiiå	
pl.			
NVA	daēnå, -å(s°)	daēnå(s°)	stūnā
I (IAbl.)	daēnābīš	daēnābiš	
DAbl.	daēnābiiō	daēnābiiō, gaēθāuu^aiiō, vōiɣnāuiiō	
G (GD)	sāsnaṇam	gaēθanąm	°zanānām
L	gaēθāhū	gaēθāhu, gaēθāhuua	maškāuvā

aθurā- 'Assyria', *bər^əxδ%ă-* 'worth strengthening(?)', *daēnā-* 'vision, soul', *gaēθā-* 'living being', *grīuuā-* 'ridge', *hainā-* '(enemy) army', *maškā-* 'inflated hide', *na^iriiā-* 'woman', *nā^irikā-* 'woman', *sāsnā-* 'instruction', *stūnā-* 'column', *taumā-* 'family', *uruuarā-* 'plant', *vaθβā-* (dual, plural) 'flock', *vōiɣnā-* kind of disaster, *°zan%ă-* 'of many kinds'.

Table 26. Nouns and adjectives. Feminine *ī*-stems

	OAv.	YAv.	OP
sg.			
N	nā^irī, vaŋ^vhī	ašaoni; °staoiiehi	uvārazmĭy, uvārazmiš
V		ašaoni	
A	təuuīšīm, vaŋ^vhīm	ašaonĭm; masiiehĭm	harauvatĭm
I (IAbl.)	vaŋhuiiā	xraoždiiehiia	harauvatĭyā
D	ušiiāi	ašaoniiāi	
Abl.		bar^əθriiāt̰	
GAbl. (GD)	aziiå, vaŋhuiiå	ašaoniiā, arduiiå	harauvatĭyā
L		pər^əθβe(?)	harauvatĭyā

Table 26. Nouns and adjectives. Feminine *ī*-stems (cont.)

du.		
NVA	azī	
pl.		
NVA	azīš, vaŋᵛhīš	ašaonǐš; masiiehǐš
I		āzīzanāⁱtibiš
DAbl.	šiieⁱtibiiō	ašaonibiiō
G (GD)		ašaonǐņam
L		xšaθrǐšu, xšaθrǐšuua

arəduuī- epithet of a goddess, *ašaonī-* < *ašauuan-* 'righteous', *ǎzī-* pregnant', *āzīzanā̆ⁱtī-* 'about to give birth', *barᵊθrī-* 'womb', *harauuatī-* 'Arachosia', *masiiehī-* < *masita-* 'large', *nāⁱrī-* 'woman', *pərᵊθβī-* < *pərᵊtu-* 'broad', *staoiiehī-* < *stūra-* 'thick', *təuuǐšī-* 'strength(?)', *ušī-* 'hearing(?)', *vaŋᵛhī-* < *vaŋhu-* 'good', *xraoždiiehī-* < *xrūždra-* 'hard', *xšaθrī-* 'female', *šiieitī-* (< **šiiatī-*) 'settlement', *uvārazmī-* 'Chorasmia'.

Table 27. Nouns and adjectives. *i-* and *aē*-stems

	OAv.	YAv.	OP	OAv.	YAv.
sg.					
N	ārmaⁱtiš	gaⁱriš	šiyātiš	°haxā	kauua, haxa
V	ārmaⁱtē	hāuuane			
A	ārmaⁱtīm	gaⁱrǐm	šiyātim	°haxāim	kauuaēm, haxāim
NAn.	bŭiri°	āhŭⁱri	vasiy(?)		
I (IAbl.)	ārmaⁱtī	axti			haša
D	axtōiiōi;	ziiānaiiaē°, patᵊe;			haše
	paⁱθiiaē°	paⁱθe			
GAbl. (GD)	ārmatōiš	garōiš	fravartaiš		
Abl.		garōiṯ			
L		gara			
du.					
NVA	ōnəⁱtī, xᵛītiº	baoⁱδi; aši	ušīy(?)		haša
IDAbl.		ašibiia			
pl.					
NV	ārmataiiō	garaiiō		kāuuaiias°	haxaiiō, xštāuuaiiō
A	īštīš	gaⁱrǐš	arašnīš		
NAn.		zaraθuštri			
DAbl.		frauuašibiiō			xštəuuiβiiō
G (GD)		gaⁱriņam			kaoiiạm, hašạm

arašni- 'ell', *aši-* neut. '(evil) eye', *axti-* 'pain', *āhŭⁱri-* 'ahurian', *ārmaiti-* deity, *baoⁱδi-* 'incense', *bŭiri-* 'plenty', *ōnəⁱti-* < **an-iti-* 'trouble', *fravarti-* proper name, *frauuaši-* immortal soul of men, *gaⁱri-* 'mountain', *haxaē-* 'companion', *ǐšti-* 'wish *or* ritual', *kauuaē-* 'poet-priest', *paiti-* 'master, husband', *šiyāti-* 'happiness', *ušī* (dual) 'hearing, understanding', *vasi-* 'much',

xštauui- a people(?), *xᵛīti-* < **hu-iti-* 'comfort', *zaraθuštri-* 'like Zarathustra', *ziiāni-* 'harm'. On *raē-*, see §3.2.1.

Table 28. Nouns and adjectives. *u*-stems

	OAv.	YAv.	OP
sg.			
N	aŋhuš	ratuš, maniiuš	marguš
V		ratuuō, maniiō	
A	ahūm	ratŭm	margum
NAn.	vohū	pouru	paruv
I (IAbl.)	ahū, xratū; xraθβā	vohu; xraθβa	bābirauš, bābirauv
D	vaŋhauuē; ahuiiē	maniiauue; aŋᵛhe, xraθβe	
GAbl. (GD)	aŋhə̄uš, paraoš	maniiaoš; pasuuō, xraθβō	kurauš
Ab		maniiaoṯ	
L	pərᵊtao, xratā	gātuuō, gātauua	margauv, gāθavā
du.			
NVA	maniiū	maniiu	
IDAbl.	ahubiiā	bāzubiia, bāzuβe	
G	maⁱniuuå, ahuuå		
L	aŋhuuō		
pl.			
NV	xratauuō	ratauuō; pasuuō	
A	xratūš, pourūš	baršnŭš	
NAn.		pouru	
I (IAbl.)		*auuaŋhuuiš(?)	
DAbl.	pourubiiō	ratubiiō, hinuuⁱβiiō	
G (GD)	vohunąm	vohunąm; pasuuąm, raθβąm	parū(v)nām
L	pourušū	vaŋhušu, pasuš.huua	

ahu- 'existence', *auuaŋhu-* 'not good', *baršnu-* 'height', *bābiru-* 'Babylon', *bāzu-* 'arm', *gātu-* 'place, throne', *hinu-* '?', *kuru-* 'Cyrus', *maniiu-* 'spirit', *margu-* 'Merv', *pasu-* 'sheep', *paᵘru-* 'much', *pərᵊtu-* 'ford', *ratu-* '(divine) prototype', *vahu-* 'good', *xratu-* 'wisdom'.

Table 29. Nouns and adjectives. Ambikinetic *u*-stems

	OAv.	YAv.	OP
sg.			
NAn.	āiiū	āiiu; dāᵘru (zānu°)	dāruv
I	yauuā	āiiu, yauua	
D	yauuōi	yauue, yauuaē°	
GAbl.	yaoš	aiiaoš, yaoš; draoš	
L		drao°	
pl.			
DAbl.		žnubiias°	

āiiu-/yao-/°yu- 'life/time span', *dā^ru-/drao-/°dru-* 'wood', *zānu-/žnu-/°xšnu-* 'knee'.

Table 30. Nouns and adjectives. *ao*-stems

	OAv.	YAv.	OAv.	YAv.	OP
sg.					
N	gāuš	gāuš	°bāzāuš		dahąyāuš
V		gao°			
A	gąm	gąm		dańhaom, nasāum	dahąyāum, dahąyāvam
D	gauuōi	gauue			
GAbl.	gə̄uš	gə̄uš, diiaoš			
Abl.		gaoṱ			
L					dahąyauvā
du.					
NVA	gāuuā	gāuua		bāzauua	
G		°gauuå			
pl.					
NV		gauuō		dańhāuuō	dahąyāva
A	gå	gå			
I		gaobīš			
G (GD)		gauuąm			dahąyūnām
L					dahąyušuvā

°*bāzu-* 'having . . . arms', *dańhu-/dahąyu-* 'land', *diiao-* 'heaven', *gao-* 'bull, cow'.

Table 31. Nouns and adjectives. Laryngeal *ī*- and *ū*-stems

	ī-stems			ū-stems		
	YAv.		OP	OAv.	YAv.	OP
sg.						
N	°jīš	zarənaēniš		fsᵊratuš	°sǔš	tanuš tanŭš
A	°jĭm	zaranaēnĭm		tanuuə̄m,*sǔm fsᵊratūm	tanŭm	tanŭm
I (IAbl.)		zaranaēniia		hizuuā		
D				tanuiiē	tanuiie	
Abl.					tanuuaṱ	
Abl.G		°fᵊδriiō		°tanuuō, °suuō hizuuō	tanuuō	
L					tanuui	
du.						
NVA	friia					
pl.						
NVA	jiiō	tištriiaēⁱniias°	aθaⁿgainiya	tanuuō		
I				hizubīš		
DAbl.					tanubiiō	
G					tanunąm	
L				*tanušu°	tanušu	

aθaⁿgaina- 'of stone', *frī-* 'friendly', *°jī-* 'living', *zarənaēna-* 'of gold', *°fᵊδrī-* 'having a . . . father', *fsᵊratū-* '?', *hizū-* 'tongue', *°sū-* 'revitalizing', *tanū-* 'body', *tištriiaē̆ⁱnī-* (pl.) 'Pleiades'.

Table 32. Nouns and adjectives. Stems in labial stops (*p*)

	OAv.	YAv.	OP
sg.			
N		āfš, kərᵊfš	(āpĭ[š])
A	kəhrpə̄m	āpəm, kəhrpəm	
I		apa, kəhrpa	
D		ape, apaē̆°; xšape	
GAbl. (GD)		ā̆pō, kəhrpō, xšapō	xšapa
Ab		apaṭ	xšapaṭ
L		apaiia, kəhrpiia	ā̆piyā
du.			
NVA		āpa	
pl.			
N		āpō, kəhrpas°	
A	apō	ā̆pō	
I			ā̆biš
DAbl.		aiβiiō	
G	kəhrpạm	apạm, kəhrpạm	

ā̆p- 'water', *kəhrp-* 'body', *xšap-* 'night'.

Table 33. Nouns and adjectives. Stems in velar stops (*k*, *g*, *nk*)

| | k-stems | | nk-stems | g-stems | |
	OAv.	YAv.		OAv.	YAv.
sg.					
N	vāxš, °haxš	vāxš, °mərᵊxš °hāxš	apaš, paⁱti.iiąš, viš	usixš, druxš	druxš
A	vācəm	vācim	°niiā̊ncim, hunaⁱriiā̊ncim	drujəm, būjim	drujəm/-jim, °bujim
NAn.		°hāgᵊṭ			
I	sūcā	vaca	parāca, vīca		
GAbl.	vacō	vacō, °mərᵊcō		drūjō	drūjō
Abl.					drujaṭ
pl.					
N		vācō	niiā̊ncō, hunaⁱriiā̊ncō		°drujō
A		vacō			
I		vāɣžⁱbiš			
DAbl.		vāɣžⁱbiiō			
G		vacạm			adružạm

adruj- 'having no deception', *apā̆nk-* 'backward', *buj-* 'deliverance', *drug-/druj-* 'deception', *°hā̆k-* 'following', *hunaⁱriiā̆nk-* 'skillful', *°mərᵊk/°mərᵊc-* 'destroying', *niiā̆nk-* 'downward', *paⁱtiiā̆nk-* 'toward', *sūc-* 'burning', *usig-* kind of priest, *vāk-/vāc-* 'voice', *vĭ̆nk-* 'to the sides'.

Table 34. Nouns and adjectives. Stems in dental stops (*t, d*). Root nouns.

| | *t*-stems | | *d*-stems | | |
	OAv.	YAv.	OAv.	YAv.	OP
sg.					
N		°xšnus, °bərᵊs			
A	xšnūtəm	°xšnŭtəm, °bərᵊtəm	išudəm	pāδəm, sarᵊδəm	θardam
NAn.					
I			vərᵊdā	°vərᵊda	
D		°bərᵊte			
GAbl. (GD)	stūtō	astō			θardaʰ
Abl.		°bərᵊtaṭ			
du.					
NVA		°bərᵊta; asta		pāδa	
IDAbl.				(thematic pāδauue)	(pādaibiyā)
pl.					
N		stūtō	išudō		
A		stūtō			
NAn.	as°(?)	asti			
I	azdᵊbīš	azdᵊbīš			
DAbl.	°bərᵊdᵘbiiō			paδᵊbiias° (paṭ.biias°)	
G	stutạm	°stŭtạm; astạm		sarᵊδạm	

ast- 'bone', °*bərᵊt-* 'carrying, riding', *išud-* 'debt(?)', *pǎd-* 'foot', *sarᵊd-/θar(a)d-* 'year', *stut-* 'praise', *vərᵊd-* 'growth', *xšnut-* 'satisfaction'.

Table 35. Nouns and adjectives. Stems in dental stops (*t*). *tāt*-stems

	OAv.	YAv.
sg.		
N	amərᵊtatås	haᵘruuatās, haᵘruuås°
A	amərᵊtatātəm	haᵘruuatātəm
I	amərᵊtatātā	
D	yauuaētāⁱtē	yauuaētātaē°
GAbl.	amərᵊtatātas°	haᵘruuatātō
Abl.		ⁱriθiiạstātaṭ
L	amərᵊtatāⁱtī	uštatāⁱtiia
du.		
NVA	amərᵊtatātā, hauruuātā	haᵘruuatāta
IDAbl.		haᵘruuaṭbiia
GL		amərᵊtātå, haᵘruuătå
pl.		
N		uxšiiạstātō
A		uparatātō
G		vaŋhutātạm

amərᵊtatāt- 'fact of not being dead', *haᵘruuatāt-* 'wholeness', *ⁱriθiiạstāt-* 'fact of dying', *uparatāt-* 'superiority', *uštatāt-* 'state of having obtained one's wishes', *uxšiiạstāt-* 'state of growing', *vaŋhutāt-* a bloody substance, *yauuaētāt-* 'eternity'.

Table 36. Nouns and adjectives. Stems in dental stops (*t*). *ant*- and *Hant*-stem adjectives

	YAv.	
sg.		
N	bərᵊzō	maza
V	bərᵊza (*Vispered* 21.2)	
A	bərᵊzaṇtəm	mazåṇtəm
NAn.	bərᵊzaṯ	*mazāṯ
I	bərᵊzata	
D	bərᵊzaⁱte	
GAbl.	bərᵊzatō	
L	bərᵊzaⁱṇtiia	
du.		
NVA	bərᵊzaṇta	
IDAbl.	bərᵊzəṇbiia	
pl.		
N	bərᵊzaṇtō	
G	bərᵊzatạm	

bərᵊzaṇt- 'high', *mazāṇt-* 'great'.

Table 37. Nouns and adjectives. Stems in dental stops (*t*). *uuant*-, *mant*-stem adjectives

	uuant-stems			*mant*-stems
	OAv.	YAv.	OP	YAv.
sg.				
N	drəguuå; θβāuuạs	druuå; cuuạs	tunuvā	xratumå
V		druuō		
A	drəguuaṇtəm	druuaṇtəm	tunuvaⁿtam	gaoməṇtəm
NAn.	astuuaṯ			
I	drəguuātā			gaomata
D	drəguuāⁱtē, mauuaⁱtē	astuuaⁱte		vohumaⁱte
GAbl.	drəguuatō	astuuatō	(tunuvaⁿtahyā)	ratumatō
Abl.	druuataṯ			
L		astuuaⁱṇti, cuuaⁱti		
du.				
NVA		anusauuaṇta		
IDAbl.		cuuaṯbiia		

Table 37. Nouns and adjectives. Stems in dental stops (*t*).
uuant-, _mant_-stem adjectives (cont.)

| | *uuant*-stems | | | *mant*-stems |
	OAv.	YAv.	OP	YAv.
pl.				
N	drəguuaṇtō	cuuaṇtō		afrašū́maṇtō
A	drəguuatō			
NAn.	mīždauuaṇ			
I	drəguuō.dᵊbīš			yātumaṭbīš
DAbl.	drəguuō.dᵊbiiō	druuaṭbiiō		
G	drəguuataṃ	druuataṃ		yātumataṃ
L	drəguuasū			

afrašū́maṇt- 'without forward movement', *astuuaṇt-* 'with bones', *cu-uaṇt-* 'how much', *drəguuaṇt-/druuaṇt-* 'possessed by deception', *gaoməṇt-* 'containing milk', *mą̆uuaṇt-* 'like me', *mīždauuaṇt-* 'generating fees', *ratu-maṇt-* 'containing (the word) *ratu*', *tunuvaⁿt-* 'mighty', *vohumaṇt-* 'possessing good things', *xratumaṇt-* 'wise', *yātumaṇt-* 'possessed by sorcerers'.

Table 38. Nouns and adjectives. Stems in dental stops (*t*).
Present participles in -*ant*-

| | Athematic | | Thematic | | |
	OAv.	YAv.	OAv.	YAv.	
sg.					
N	hạs, stauuas		xšaiias	barō	fšuiias
A	°iiaṇtəm	həṇtəm	fšuiiaṇtəm	barəṇtəm	fšuiiaṇtəm
NAn.		haṭ	yasō.x̌iiə̄n		xᵛaⁱriiạn, mạnaiiən
D		haⁱte	hanəṇtē, fšuiieṇtē	barəṇte	fšuiiente, fšuiiaṇtaē°
GAbl.		hatō	saošiiaṇtō	barəṇtō	fšuiiaṇtō
Abl.		—		°saocaṇtaṭ	ṭbišiiaṇtaṭ
L		daδāⁱti (N. 66?)		barəṇti	družaṇti
du.					
NAn.					xᵛaⁱriiaṇti
G (GL)		°uxšaiiaṇtå			
pl.					
N	daṇtō	haṇtō	marəṇtō, afšuiiaṇtō	barəṇtō	
A	—		nadəṇtō, juuaṇtō	barəṇtō	fšuiiaṇtō
I		haδbiš			
DAbl.	—			—	ṭbišiiaṇbiiō
G	hātaṃ	hātaṃ	saošiiaṇtaṃ	barəṇtaṃ	ṭbišiiaṇtaṃ
L		fšuiiasū			

baraṇt- 'carrying', *(da)daṇt-* 'giving', *družaṇt-* 'lying', *fšuiiaṇt-* 'sheep-herder', *hanaṇt-* 'gaining', *haṇt-/hăt-* 'being', *iiaṇt-* 'going', *juuaṇt-* 'living', *maraṇt-* 'remembering', *mạnaiiaṇt-* 'resembling', *nadaṇt-* 'reviling', *yasa-x̌iia-* 'seeking to obtain glory', *saocaṇt-* 'burning', *saošiiaṇt-* 'who will revi-

Table 41. Nouns and adjectives. *iiah-* (comparative), *uuah*-stems (perfect participles)

	OAv.	YAv.	OP	OAv.	YAv.
sg.					
N	spaniiå	spaniiå	tauvīyā[h]	vīduuå	vīduuå
V	nā[i]diiåŋhəm				
A		spaniiaŋhəm			°vīδuuåŋhəm
NAn.	vahiiō				daθušō
D		kasiiaŕhe		vīdušē	vīduše
Abl.G				vīdušō	
Abl.					daθušaṯ
du.					
NVA		āsiiaŋha			
pl.					
NVA		masiiaŋhō			vīδuuåŋhō
NAn.	vax́iiå				
I		staoiiə̄bīš			dadūžbīš
G		kasiiaŋhạm			vaonušạm
L		zazušu			

See the text (§3.4).

Table 42. Nouns and adjectives. *an-*, *Han*-stems

	OAv.		YAv.		
sg.					
N	uxšā, kar[a]pā	mąθrā		xšapa	mar[a]ta
V					
A		asānəm	xšapanəm		
I					mar[ə]θnō
D		mąθrānē		xšafne	mar[ə]θnaṯ
Abl.G		mąθrānō	ašnō	xšafnō	
Abl.			ašnāaṯ°	xšafnāaṯ°	
pl.					
NV	uxšānō, kar[a]panō	mar[ə]tānō	asānō	kar[a]panō, xšapanō	
A	asə̄nō			xšafnas°	
G				karafnạm, xšafnạm	
L				xšapō.huua	

asan-/ašn- 'stone, sky', *kar[a]pan-* kind of priest, *mar[ə]tān-/mar[ə]θn-* 'mixed with death, mortal', *mąθrān-* 'holder of the poetic thought', *uxšan-* 'bull', *xšapan-/xšafn-* 'night'.

Table 43. Nouns and adjectives. *man-*, *uuan-*stems

	OAv.	YAv.	OP	OAv.	YAv.	OP
sg.						
N	aⁱriiamā	aⁱriiama		ašauuā	ašauua	ạrtāvā
V				ašāum		
A		aⁱriiamanəm	asmānam	ašauuanəm	ašauuanəm	
I	aⁱriiamnā	aⁱriiamᵃna				
D		aⁱriiamaⁱne		ašaunē, ašaunaē°	ašaone	
Abl.G	aⁱriiamanas°	aⁱriiamanō		ašaunō	ašaonō	
Abl.					ašaonaṯ	
L		aⁱriiamaⁱni			ašauuanᵃiia	
du.						
NVA		rasmana			ašauuana	
G (GL)					ašaonå	
pl.						
NVA				ašauuanō	ašauuanō	
A		rasmanō		ašāunō	ašaonō	
I					ašaonŏš	
DAbl.		rasmaoiiō		ašauuabiiō	ašạuuabiiō, ašạuuaoiiō	
G				ašāunąm	ašāunąm	

aⁱriiaman- a deity, *asman-* 'sky', *ašauuan-/ạrtāvan-* 'sustainer of order', *rasman-* 'battle-line'.

Table 44. Nouns and adjectives. Neut. *man-*stems

	OAv.	YAv.	OP
sg.			
NAn.	ạnmā	barᵊsma	nāmā
I	mazēnā		baršnā
D	ạnmēnē	°cašmaⁱne	
Abl.G	cašmēṇg	barᵊsma	
Abl.		barᵊsmən, cašmanaṯ	
L	ạnmēnī, cašmaⁱnī, cašmạn		
du.			
L		cašmanå	
pl.			
NAn.	nāmạn, afšmānī	nāmạn	
I		nāmēnŏš	
DAbl.	duuạnmaⁱbiias°	ᵘruθmaⁱbiiō	
G	nāmanąm	nāmanąm	
L		dāmōhu, dāmahuua	

afšman- 'rhythm(?)', *ạnman-* 'breathing', *barᵊsman-* 'barsom', *barᵊzan-/baršn-* 'height, depth', *cašman-* 'eye', *dāman-* 'creation', *duuạnman-* 'cloud', *mazan-* 'size', *nāman-* 'name', *ᵘruθman-* growth'.

Table 45. Nouns and adjectives. Miscellaneous *n*-stems

	Root nouns		Miscellaneous *u̯an*-stems					
	OAv.	YAv.	OAv.	YAv.				
sg.								
N	°jā	°ja/°jå	ᵘruuā	ᵘruua	spā	āθrauua	yᵃuua	zruua
V					spānəm	āθraom	yum	
A			ᵘruuānəm	ᵘruuānəm		āθrauuanəm	yᵃuuānəm	zruuānəm
D		°ɣne		ᵘrŭne				zrŭne
Abl.G		°ɣnō/ °janō		ᵘrŭnō	sŭnō	aθaᵘrunō		zrū
Abl.		°ɣnaṯ					yŭnaṯ	
du.								
NVA				spāna				
pl.								
NV		°janō	ᵘruuānō	ᵘruuạnō				
A		°janō	ᵘrunas°	ᵘrŭnō		(aθaᵘrunạs°)		
I								
DAbl.				ᵘruuōⁱbiiō	sŭnⁱš			
G		°ɣnạm			sŭnạm			

āθrauuan-/aθaᵘrun- kind of priest, *°jan-/ɣn-* 'smasher', *ᵘruuan-/ ᵘrŭn-* 'soul', *span-/sŭn-* 'dog', *yuuan-/yıŭn-* 'youth', *zruuan-/zrŭn-* 'time'.

Table 46. Nouns and adjectives. *r*-stems

	OAv.	YAv.	OP
sg.			
N	nā; ptā, dugᵊdā; dātā; ātarš	nā; pita, duɣδa, xᵛaŋha; dāta; ātarš	pitā
V	ātarᵊ	narᵊ; pitarᵊ; dātarᵊ; ātarᵊ	
A	narə̆m; pᵃtarə̄m;	narəm; pitarəm, duɣδarəm, xᵛaŋharəm;	framātāram
	dātārəm; ātrə̄m	dātarəm; ātrəm	
I	āθrā	nara	
D	narōi; fᵊδrōi, piθrē; āθrē	naⁱre; fᵊδrōi/piθre; brāθre; āθre	
Abl.		nərᵊṯ	
Abl.G	nərᵊš; āθrō	narš; piθrō, brāθrō; zaotarš;	piça
L		naⁱri	
du.			
NVA		nara; pitarə, zāmātara(?)	
IDAbl.		nərᵊbiia	
G (GL)		narå	
pl.			
NV	narō; mātarō; marᵊxtārō	narō; pᵃtarō, mātarō; dātārō; ātarō	
A	nərạš; mātərạš°	nərạš, narə̄š; fᵊδrō, mātərạš°	
DAbl.	nərᵊbiias°	nərᵊbiiō, nəruiiō; ptərᵊbiiō	
G	narạm, dugᵊdrạm	narạm; duɣδrạm, āθrạm	

ātar- 'fire', *brātar-* 'brother', *dātar-* 'creator', *dugᵊdar-/duyδar-* 'daughter', *framātar-* 'commander', *mātar-* 'mother', *nar-* 'man', *ptar-* 'father', *xᵛaŋhar-* 'sister', *zaotar-* 'libator', *zāmātar-* 'brother-in-law'.

Table 47. Nouns and adjectives. Neut. *r/n*-stems

	OAv.	YAv.	OP
sg.			
NAn.	aiiarˀ, huuarˀ, rāzarˀ	aiiarᵊ, huuarᵊ, karšuuarᵊ, ʳuruθβarə, baēuuarᵊ	*vazᵣ
I	rašnā		vašnā
Abl.G	xᵛōng (< *huu̯aŋh), rāzōng	aiiᵃ, hū (< *huu̯aŋh), *ʳuruθβa	
Abl.		ʳuruθβən	
L		aiiᵃn	
du.			
NVA	sāxᵛōnī(?)		
pl.			
NAn.	aiiārˀ, saxᵛārˀ	aiiᵃn(i), karšuuᵃn, ʳuruθβᵃn, baēuuᵃn, baēuuani	
G	rāšnᵃm	asnᵃm, baēuuaranᵃm	
L		karšuuōhu, ʳuruθβō.huua	

aiiar/n- 'day', **azar/asn-* 'day', *baēuuar/n-* '10,000', *huuar/n-* 'sun', *rāzar/n-* 'ruler(?) (measuring device)', *sāxᵛar/n-* 'instruction(?)', *karšuuar/n-* 'continent', *ʳuruθβar/n-* 'intestine', **vazᵣ/vašn-* 'greatness'.

Table 48a. Nouns and adjectives. Stems in sibilants

	s-stems (OP *θ*-stems)			z-stems	
	OAv.	YAv.	OP	OAv.	YAv.
sg.					
N	—	°darš, spaš		dərᵊšˀ°, maš	*darš, barᵊš
V					
A	vīsəm	vīsəm, spasəm			bərᵊzəm
NAn.					
I (IAbl.)	—	masa, vīsa	viθāˀ°	dərᵊzā	
D	—	vīse		mazōi	
Abl.G	—	masō, vīsō		mazˀ	bərᵊzō
Abl.		vīsaṯ			
L	—	vīsi, vīsiia	viθiyā	varᵊzī	
pl.					
NV		spasō			
A		vīsō			
I (IAbl.)			viθbiš		
DAbl.	vīžⁱbiiō	vīžibiiō			
G		vīsᵃm		°uuarəzᵃm	

bərᵊz- 'high', *°biš* 'healing', *°darᵊs-* 'seeing', *dərᵊz-* 'chain', *mas-* 'large', *maz-* 'great', *spas-* 'spy', *varᵊz-* 'invigorant', *vīs-*, *viθ-* 'town'.

Table 48b. Nouns and adjectives. Stems in sibilants

	š-stems		
	OAv.	YAv.	OP
sg.			
N	°biš		
A	īšəm		
NAn.	təuuiš	vīš, snaⁱθiš, arᵊduš	hadiš
I	snaⁱθišā	snaⁱθiša, arᵊduša	
D		°ṯbiše	
Abl.G	īšō	hadišas°	
Abl.		arᵊdušaṯ	
du.			
IDAbl.		snaⁱθīžbiia	
pl.			
NA	°išō		
G		°gūšạm, snaⁱθišạm, arᵊdušạm	

arəduš a degree of sin, °*gū̆š* 'listening (to)', *hadiš* 'homestead, seat', °*iš-* 'seeking', *ĭš-* kind of ritual offering, *snaⁱθiš* 'blow', *təuuiš* 'violence(?)', °*ṯbiš* 'harming', *vī̆š* 'poison'.

Table 49. Personal pronouns. 1st person

	OAv.	YAv.	OP
	tonic; enclitic	tonic; enclitic	tonic; enclitic
sg.			
N	azə̄m	azəm	adam
A	—; mā	mạm; mā	mām; -mā
D	maⁱbiiā, maⁱbiiō; mōi	māuuōiia; mē	
Abl. (IAbl.)	maṯ	maṯ	—; -ma
G (GD)	—; mōi	mana; mē	manā; -maiy
L	mōi(?)		
du.			
NVA	vā(?)		
pl.			
NV	vaēm	vaēm	vayam
A	ahmā; nå	—; nō	
I	ə̄hmā		
D	ahmaⁱbiiā; nə̄	—; nō	
Abl.	ahmaṯ		
G (GD)	—; nə̄	ahmākəm; nō	amāxam

Table 50. Personal pronouns. 2nd person

	OAv. tonic; enclitic	YAv. tonic; enclitic	OP tonic; enclitic
sg.			
N	tuuə̄m; tū	tŭm	tuvam
V		tū	
A	θβąm; θβā	θβąm; θβā	θuvām
I		θβā	
D	taⁱbiiō; tōi	—; tē	
G	tauuā; tōi	tauua; tē	
Abl.	θβaṯ	θβaṯ	
L	θβōi (Y 48.8?)		
du.			
NVA		yuuuākəm	
pl.			
NV	yūžəm; yūš	yūžəm	
A	—; vå	—; vō	
I	xšmā		
D	yūšmaⁱbiiā; və̄	yŭšmaoiiō; vō	
	xšmaⁱbiiā	xšmāuuōia	
G	—; və̄	yŭšmākəm; vō	
Abl.	yūšmaṯ, xšmaṯ	yŭšmaṯ	

Table 51a. Personal pronouns: 3rd person weak deictic *ha-/ta-*

	OAv. masc., neut.	OAv. fem.	YAv. masc., neut.	YAv. fem.
sg.				
N		hā	hō	hā
A	tə̄m	tąm	təm	tąm
NAn.	taṯ		taṯ	
I	tā			
du.				
NA	tā		tā	
NAn.			tē	
pl.				
N	tōi	tå	tē, taē°	tå
NAn.	tā		tā	
A	tə̄ṇg			
I	tāiš		tāiš	

Table 51b. Personal pronouns: 3rd person *i-*, *hi-*/*ši-*, YAv./OP *di-*

	OAv. masc., neut.	fem.	YAv. masc., neut.	fem.	OP masc.
sg.					
N		hī			-šim, -dim
A	īm	hīm	ǐm, dim	dim	
NAn.	īt̰		ǐt̰, dǐt̰		-diy
I (IAbl.)					-šim (!)
GD	hōi	hōi	hē, šē	hē, šē	-šaiy
du.					
NVA		hī			
NAn.	hī				
pl.					
A	iš	hīš	dǐš	dǐš	šǐš, -dǐš
NAn.	ī				
G					-šām

Table 52. Near-deictic demonstrative pronoun *a-*/*ima*

	OAv. masc., neut.	fem.	YAv. masc., neut.	fem.	OP masc., neut.	fem.
sg.						
N	aiiə̄m	īm (< *iiam) (Y 45.3?)	aēm	īm	iyam	iyam
A		imąm	iməm	imąm	imam	imām
NAn.	imat̰		imat̰		ima	
I		ōiiā (< *aiiā)	ana	aiia	anā	
D	ahmāi	ax̌iiāi	ahmāi	aŋ́hāi		
Abl.	ahmāt̰		ahmā̆t̰	aŋ́hāt̰		
G (GD)	ahiiā		aŋ́he, ahe	aŋ́hå		ahạyāyā
L	ahmī		ahmi, ahmiia	aŋ́he (< -i̯ă̄)		
du.						
NVA			ima			
NAn.						
IDAbl.		ābiiā		ābiia		
G	ås°, aiiå		aiiå			
pl.						
N (NA)			ime	imå	imaiy	
A			imą			
NAn.	imā		ima		imā	
I (IAbl.)	āiš	ābīš	āiš	ābīš	imaibiš	
DAbl.	aēⁱbiiō	aⁱbiias°	aēⁱbiiō	ābiiō		
G (GD)	aēšąm		aēšąm	åŋhąm	imaišām	
L		āhū	aēšu, aēšuua	āhuua		

Table 53. Far-deictic demonstrative pronoun *hau-/aṷa-*

	OAv.		YAv.		OP	
	masc., neut.	fem.	masc., neut.	fem.	masc., neut.	fem.
sg.						
N	huuō̄ᵃ	hā	huuō, hāu	huuō, hāu	hauv	hauv
A	*auuə̄m	auuạm	aom	auuạm	avam	avām
NAn.	auuaṯ		auuaṯ		ava, avaš°	
I (IAbl.)	auuā		auua		avanā	
D				auuańhāi		
Abl.				auuańhāṯ		
G (GD)			auuańhe	auuańhå	avahạyā	
du.						
NVA					*avā	
G	auuå					
pl.						
N (NA)			auue	auuå	avaiy	*avā
A			auuū, aū			
NAn.			auua		avā	
I	auuāiš		auuāiš			
DAbl.				auuabiiō		
G	auuaēṣ̌ạm		auuaēṣ̌ạm		avaišām	

a. On *huuō, ana-* see §3.6.

Table 54. Relative pronouns

	OAv.		YAv.		OP	
	masc., neut.	fem.	masc., neut.	fem.	masc., neut.	fem.
sg.						
N (NA)	yō	yā	yō	yā	haya	hayā
A	yə̄m, yim	yạm	yim	yạm	tayam	tayām
NAn.	hiiaṯ		yaṯ		taya	
I	yā		yā		tayanā	
D	yahmāi		yahmāi			
Abl.			yahmā̆ṯ	yeńhāt		
G	yehiiā		yeńhe	yeńhå		
L	yahmī		yahmi, yahmiia	yeńhe		
du.						
NVA	yā		yā	yōi	tayā	
G	yaiiå		yaiiå			
pl.						
N (NA)	yōi	yå	yōi, yaē°	yå	tayaiy	tayā
A	yə̄ṇg		yạ			
NAn.	yā		yā	tayā		
I	yāiš			yāiš		
DAbl.	yaē[i]biiō		yaē[i]biiō	yābiiō		
G	yaēṣ̌ạm		yaēṣ̌ạm	yåŋhạm	tayaišām	
L	yaēṣ̌ū		yaēšu	yāhu, yāhuua		

Table 55. Interrogative and indefinite pronouns

	OAv.		YAv.		OP	
	masc., neut.	fem.	masc., neut.	fem.	masc., neut.	fem.
sg.						
N	kā̆, kas°, ciš	kā	kō, ciš	kā	kā̆, kaš°	ciš°
A	kəm, °cīm	kąm	kəm, cim	kąm		
NAn.	kaṱ, °cīṱ		kaṱ, ciṱ		(°ciy)	
I	kā		kā, kana			
D	kahmāi		kahmāi	kańhāi		
Abl.			kahmāṱ			
G	kahiiā, cahiiā		kahe	kańhå		
L		kahiiā°	kahmi, cahmi	kańhe		
pl.						
N	kōi, caiias°					
A	kə̄ṇg		kōi, caiiō			
NAn.	cī°		kā°			
I			kāiš			
DAbl.	kaēⁱbiiō		kaēⁱbiiō			
G			kaŋhąm			