A GRAMMAR
OF GATHA-AVESTAN
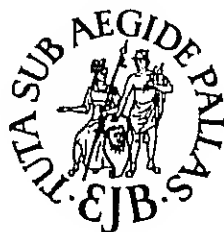
A GRAMMAR
OF GATHA-AVESTAN

BY

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DEDICATED TO
Maria C. Monna

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PREFACE

This is a — historical — grammar of Gatha Avestan. This language is the oldest form of Iranian; it is as archaic as Sanskrit, and therefore of great interest to Indo-European linguistics. It is even more archaic than Sanskrit in that it preserves systematically the PIE laryngeals. The Gathic texts are extremely difficult to understand. Therefore many problems remain, but enough is certain to write a grammar of the language. This seems a good moment to do so, after the thorough commentaries of Humbach and Insler, and Mrs. Monna's study of the metrics.

This book was designed as a short grammar, not as a handbook. But, as the corpus is relatively small, it was in many cases obvious to give all the relevant forms. In those cases, then, it got the character of a handbook, but it is not meant to be so.

Then, this is a book about what we *know*, not about all the problems of interpretation that remain. This is not a new commentary on the (language of the) Gatha's: the only aim is to present in a systematic way what seems certain at present. In problematic cases I have sometimes made my own choice, sometimes I have given different views presented, sometimes I have given only one interpretation with a question mark, sometimes I have just mentioned that the form is of uncertain interpretation. Everybody who knows the situation will recognize that this is unavoidable, but everybody will take other decisions. I want to stress that these problematical cases hardly ever are of decisive importance for establishing morphological categories. That is why I have not given too much attention to these cases. Who wants to study them, must turn to the commentaries and other studies, not to this grammar. It may be added that writing a book about a text which is in so many places ununderstandable is an ungratifying task.

I have used a phonological transcription throughout. A chapter has been devoted to establishing the phonemic system, where all problems regarding the spelling, which are often rather complicated, are discussed. The advantage is, of course, that the linguistic problems are not hampered by spelling questions. Here again others may decide slightly differently, but I think that such differences will not affect the usefulness of the grammar. A disadvantage is that the forms are not found in the traditional spelling. However, it is mostly not difficult to get from the spelling of the manuscripts to the phonemic notation. (A 'conversion'-list is given on p. 223)

This grammar is written primarily for Indo-Europeanists, and it is therefore a historical grammar. However, as Gathic is so close to Sanskrit, it seemed not useful to discuss all those questions which are treated in historical grammars of Sanskrit. Therefore, the historical part consists of a complete historical phonology, but of the morphology only those points are discussed where the language differs from Sanskrit. There is a rather extensive comparison of the verbal system with that of Sanskrit. This is done because the Indo-European verbal system—the emphasis is on system—still presents many problems and because the Sanskrit and Gathic systems, which are obviously the same system, without a doubt present the most archaic system. The verbal system of Late Avestan has completely changed, so the comparison of Gathic with Sanskrit gives all the Iranian evidence (the Old Persian system too being much simplified). A drawback was that there is no up to date treatment of the Sanskrit system, so it will need correction in many instances on this side.

I have not given a full treatment of the word-formation. On the one hand this would have meant a considerable amount of work, and on the other hand it seems not useful in this case to study only the Gathic material. Here all Avestan material should be taken together, which would take a full volume. I have given retrogade lists of all nouns, so that the material is in any case easily acessible. I have given a full description of the formation of the compounds, partly because it is a good example—with not too extensive material—of all Indo-Iranian types of compound.

After I had a first draft ready, I was able to use Kellens's study of the Avestan verb, because the author was so kind as to send me the proofs of his book. In cases where I doubted, I have mostly adopted Kellens's view.

The manuscript was finished in december 1984.

I am much indebted to my colleague F. H. H. Kortlandt for his comments on various stages of the manuscript, espccially on the phonological system.

I am also indebted to Mr. Kellens, who read the final version of the text.

I express my thanks to A. Lubotsky, who assisted me in the preparation of some parts of the book.

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ABBREVIATIONS

The abbreviations, for languages and for grammatical terms, are the usual ones. Note that cases may be indicated by the first letter of case, number and gender, the first with a capital: Gsf = gen. sg. fem.; NApn = nom.-acc. pl. ntr. (Ab = ablative.)

13.2a etc. refers to the Gathas, so Y(asna) 13.2a is meant.

YH = Yasna Haptanghaiti.

A reference to this book is made with a Roman cipher for the chapter and an Arabic cipher for the section: IV 52.3. When there is no Roman cipher, the reference is to the same chapter.

INTRODUCTORY REMARKS

Gatha-Avestan is the language of the oldest part of the Avesta, the holy book of Zoroastrianism. It is the language of the Gathas, a number of hymns from Zarathustra himself.

Zarathustra must be dated between 500 and 1000 BC. We cannot go into the debate on his date. As to the linguistic side, the fact that Gathic is as archaic as Vedic Sanskrit, and much more archaic than Old Persian, a date in the beginning of this period is more likely than one towards the end of it.

Gathic is the oldest form of Iranian. The other texts of the Avesta, in Late Avestan, start centuries later. Avestan is an East Iranian dialect, as opposed to Old Persian, from the inscriptions of the Achaemenid kings, which is a Western dialect.

The Gathas are part of a book of hymns, the Yasna. They comprise Y 28-34, 43-51 and 53. I have included Y 53, though it is clear that it is either of a later date, or in a different tradition. I have also included the material from the Yasna Haptanghaiti (Y 35-41), always clearly marked as such, as it is a somewhat greater text. As this text is not metrical, the important data provided by the metre are absent here. I have not added the material of the other old Avestan texts, because I thought it better to present a homogeneous corpus; and because there is no recent philological treatment of these texts.

The grammar is a historical phonology and morphology; it gives no syntax. Its aim is primarily to present in a systematic way the forms of the language as interpreted in the commentaries of Humbach and Insler.

The historical treatment gives the development from Proto-Indo-European and is primarily a comparison with Sanskrit. There is much that is not given: no chronology for the developments has been attempted, so there is no step by step reconstruction of Proto-Indo-Iranian, Proto-Iranian, Proto-East-Iranian, as this would require a full comparative grammar of Indo-Iranian. This means that there is no systematic comparison with Old Persian. There is no study of the relation with Late Avestan (because there is no up to date description of Late Avestan). Though it is a historical grammar, it is in the first place a descriptive grammar of the language of the Gathas, at least as far as we have it.

As to the text, I have followed the text given by Humbach 1959. The metrical interpretation is based upon the work of Mrs. Monna (1978).

As the metrical interpretation is often of major importance, I give in the first chapter a few points where I deviate from her text, and a discussion of the metrical evidence.

The second chapter gives a reconstruction of the phonemic system. In the morphological part the forms are given in phonemic transcription. This notation differs rather from the traditional forms of the manuscripts. I don't think that this notation will present much difficulty to the reader. In fact it concerns a rather limited number of deviations from the text, which are generally simplifications, except for those strange deformed forms which have to be corrected anyhow. Of course, a phonemic notation is a linguistic necessity, and it facilitates the presentation of the morphology and the historical interpretation very much. A conversion key, in two directions, from the text to the phonemic transcription and *vice versa*, is given at the end of the book, with the indices.

CHAPTER ONE

THE METRE AND THE TEXT

1. The metre of the Gatha's consists only of a fixed number of syllables in a unit. The text as we have it shows very many exceptions to what is clearly the ideal number of syllables in each unit. This norm is much better approached if the following facts are observed.

1. *ə*, often inserted in clusters, does not count as a syllable for the metre: *vaxəδra-*, *gənā*. Sometimes such a vowel was coloured to *a* (*karapan-* = /*karpan-*/; *šyaoθana-*; *daibiš-* with additional *i*-epenthesis was monosyllabic), to *i* (*mazibiš*) or to *ō* (*garōbiš*).

2. *ərə* was monosyllabic. (Sometimes it appears as *ōrə*: *mōrəndat̰*.)

3. *āə-* before *ā* must be neglected: *āəānū* /anu/.

4. *i-* before *ri-* and *u-* before *ru-*, *rv-* mostly did not form a syllable (*irixta-*, *urūraost*, *urvata-*; but *urvarā-* was /*urvarā-*/). This applies also to the *i-* of *iθyejō*.

5. *-ŋuh-* did not form a separate syllable; it indicated something like [ŋʋ]: *aŋuhīšcā* /ahvīšca/.

6. *y-* often was syllabic *-iy-*. (If one transcribes *-ii-*, it must be observed that it often denoted simple consonantic *y*.) Parallel is *-v-* (or *-uu-*). (The fact is due to either Sievers' Law, or to an original laryngeal.)

7. *-īm*, *-ūm* sometimes stands for *-iyam*, *-uvam*.

8. *-ao-* can stand for *-ava-* (*kərənaon*); in the same way *-aē-* can stand for *-aya-* (*daēnā* = /*dayanā*/; *gaēm* = /*gayam*/; *vaēm* = /*vayam*/).

9. *-āat̰-* represents *-āt̰-* (rare; *yāat̰*, *vīrāat̰*).

10. Contractions have occurred that did not belong to the original text: *āyōi* /ā iyai/, *āitē* /ā itai/. Note *frōsyāt̰* /fra asyāt̰/.

11. Laryngeals, or their representative (here written ʔ), explain a large number of deviations. They are discussed in ch. IV. They concern cases where *ā* was disyllabic, or where *y*, *v* represent a syllable. Some of these cases were long since known, e.g. the gen. pl. ending *-ām* = /-aʔam/.

12. An older form of the dative singular ending of the *a*-stems, *-āya*, must sometimes be reconstructed.

13. *-duyē*, 2p middle ending, still was monosyllabic (/-dvai/).

14. Compounds did not contract two (apparently) adjacent vowels: *Vištāspa-* was /*Vištaʔaspa-*/. (Probably they contained a glottal stop; see IV 51.2.)

15. The following words must have had a more archaic shape: *ārmaitiš* was /aramatiš/; *divamna-* /dyumna-/; *jva-* was /jīva-/ and *jōya-* /jīviya-/; *cəviš-* was /caiš-/, from the root *ciš-*. For *dužazōbå*, which has *a* and *ō* for *ə*, see on the laryngeals.

16. Some words must be deleted. This is certain in the case of adverbs that were repeated, as preverbs, before the verb: 31.13c *aibī ašā* [*aibī*] *vaēnahī*. Other cases are less certain, like *mazdā* in 28.9a, or *ca* in 30.3b *manahī* [*cā*] *vacahī cā* (giving 7-8).

2. These corrections were lastly systematically studied by Mrs. Monna 1978. This grammar is based on her analysis. On the following points I differ from her interpretation. (A few misprints are also corrected.)

28

1a	7-8	*rafθrahya*
2b	7-9	*ahuʔāh*
3a		*yah* [*vāh*] *arta ufyaʔāni?*
4c		*xsaʔāi*
5b	?7-9?	*ahurāi<a>* ?; *savištāi<a>* ?
9a	7-8	*zarnaima*
10c	7-9	

29

1b	7-9?	[*ramah*] *ā hišāya drš ca taviš ca?* (/ramah/ a gloss?)
1c		*aθa;* [*mai*]?
4c	7-9/10	*aθa;* [*nah*]?
6c		*θvrštā*
8c		*dyaʔāi*
9a		*xšanmanai*

30

1b	?7-9	*ahurāi<a>* ?
1c		*artāya ca; vrāzā?*
3b	8/7-8	*šyauθnai*
3c		*aʔās?*
4b	7-10	*yaθa*
5a		*manyuʔāh varta*
7a	7-8	*manahā vahū artā ca*
11a		*sašyaθa*

31

2b		*iʔai*
6b	7-8	*amrtātas*
7a	7-8	*raiθvan*
8c	7-8	*šyauθnaišu*

9a 7-9   *aʔas*; *ašxratuš*

10a   *varta*

15b ?7-9   *duššyauθnāi<a>* ?

20c 7-8   *šyauθnāiš*

21a 7-8   *amrtātas ca*

22b 7-8   *šyauθnā*

32

2c   *varmadi*

3c 7-9?   *yāiš [a]sru(ž)dvam? būmiyāh? haptaθai*

4b 7-8   *siždyamnā*

5a 7-8   *<ā> dbnauta?*; *amrtātas*

6b 7-8   *hātamarnai ahura   vahištā vaista manahā* (This restoration of the original word order was asked by Prof. Humbach when he gave his permission to Mrs. Monna to reproduce his text; it was not realized through a technical mistake.)

6c 7-8   *artāi ca*

9c 7-8   *[mazdā] artāi*

11c 7-9   *raʔršyaʔan*

12a 7-8   *šyauθnāt*

12c   *varta*

13c 7-8/9 *dūtam*; *pāt/paʔat*

16c   *ãhayā*

33

2c ?7-9   *varāi<a>* ?

3a 7-8/9   *vrzan(i)yah*

7a   *īdvam*

8a   *šyavaʔāi*

12a   *aršva?*

12c 7-8   *fsratuʔam*

34

8b   *ašaujāh*

12c 7-8?   *hvaʔitanh?*

15a 7-8   *šyauθnā*

43

3d   *ā šaiti*

7e   *tanūši*

8e   *ufyaʔā [ca]?* Cf. 9e.

10c   *ahma/ahmāi*; *prštā?*

10d   *prštam?*

12c   *uz iʔrdyāi*

13d   *daršt?* (see IV 821b)

14d 4-7   *uz iʔrdyāi*; *az sardanāh*

44

3d 4-7   ma꞊ah

20d   anmanai

45

3b   yām

46

1c ?4-7   mā <ā> ?; vrzanā haca꞊ā

5a   ā yantam

47

4a   ra꞊ršyanti

48

6b 5-7   da꞊at

6d 5-6   ahurah ahauš   zanθai parviyahya (Same remark as on 32.6b.)

9a   vaidā

49

2b 4-7   ra꞊ršah

2c   daršt? (see IV 821b)

4c   yaiša꞊am

50

7d   za꞊aθa?

51

2a   artāya ca

4a   fsratūš

11a ?7-7   Spitamāi <a> ?

53

2a 8-5   āt ca

3b 7-5   dugdrām (see on 8c)

3d 8-7-5   aθa

6d 7-7-4   mrngdvai

7c 8-7-5   parā ca; ā nansat

8c 8-7-5   janrām xrunrām ca

The gen. ending could be -ām- as well as -a꞊am, and either *jānərąm* or *xrūnərąm* has been considered as a gloss (in which case *ca* must be deleted as well). This gives the following possibilities:

    janra꞊am xrunra꞊am ca 10 syll.

    janrām   xrunrām   ca   8

    *janra꞊am   —   *6

    *janrām   —   *5

The first and the last are impossible. The third is improbable as the first element of a 7-7-5 group is never 6. Also it is preferable not to change the text. Both words are poetic com-

pounds, not very probable as a gloss (which would have been accomodated with *ca* at that). Then 3b probably had /dugdrām/.

3. When these corrections are applied, deviations remain. The deviations from the respective norms are listed here.

.Y 28-34

The norm line has 7 + 9 syllables. Lines that do not have 7-9 are:

28.1a 7-8	29.1b 7-9/10
5a 7-8	1c 7-9/10
5b 6/7-8/9	4c 7-9/10
6a 7-9/10	Given the extreme regularity of this
6c 7-8/9/10	hymn it is probable that the dubious
7a 7-8	verses also had 7-9.
9a 7-8	
10a 7-8	

30.1b 6/7-9	31.2a 7-8	33.10a 7-8
2c 7-9/10	5a 7-8	10b 7-8
3b 7/8-8	6b 7-8	15b 6/7-9
4a 7-8	7a 7-8	17c until 21b
4b 7-10	7c 7-10	7-8 (12 ×)
5a 7-8	8a 7-8	22a 7-8
7a 7-8	8b 7-8	22b 7-8
7b 7-8	8c 7-8	22c 7-8
7c 7-8	9a 7-9	
8c 7-10	9b 7-8	
9c 7-8	9c 7-8	

32.1b 7/8-9	33.2b 7-8	34.1a 7-8
2a 7-8	2c 6/7-9	1c 7-8
3a 7-8	3a 7-8/9	3a 7-8/9
3b 7-8	3b 7-8	3b 7-8
3c 7-9/10	3c 7-8	4c 6-9
4b 7-8	4b 7-10	5b 7-8
4c 7-8	5b 7-8	6b 7-8
5a 7-8	7b 7-8	7b 7-8
5b 7-8	9b 7-8	8a 7/8-10
6a 7-10?	9c 7-8	9b 7-8
6b 7-8	10a 7-8	11a 7-8
6c 7-8	11a 7-8	11b 7-8/9

7b 7-8	11b 7-8	11c 7-10
9a 7-8	11c 7-8	12c 7-8
9c 7-8	12b 7-8	13a 7-8
12a 7-8	12c 7-8	14a 7-8
13c 7-8/9	13abc 7-8	14b 7-8
15b 7-8		14c 8-9
15c 7-8		15a 7-8
16b 7-8		15b 7-8
16c 7-8		

The deviations can be grouped as follows:

norm	7	9
—1	1 + 5? (0,3-2%)	85 + 6? (28,3-30%)
+ 1	1 + 3? (0,3-1,3%)	6 + 8? (2-2,6%)
total	2 + 9? (0,6-3,6%)	

The total number of lines in 28-34 is 299.

The number of 7-8 lines is about 30%. This, then, is a regular alternative for 7-9. Note that it is clearly consciously used, because Y 29 has no 7-8 line; and Y 31 has from 11a to 17b only 7-9, but from 17b to 22c (the end) 7-8 (with the sole exception of 17c, which is 7-9). This shows that the difference between 8 and 9 could be used deliberately.

In other respects the maximum deviation is 3,6% (in a half line), which is a very low figure: three or four variants in 100 half lines.

Y 43-50

The norm line has 4 + 7 syllables. Lines that do not have 4-7 are:

43.4b 4-6	44.8b 3-7	
7d 4-8	12e 5?-7	
10c 4-6	17b 4-8?	
10d 4-7/8		
11c 4-6		
45.3d 3-7	46.1c 3?-7	6b 3-7
8b 3-7	1e 3-7	9b 3-7
9b 4-6	3e 3-7	15d 3-7
10d 3-7	5b 3-7	17a 3-7
47.4b 4-6	48.5a 5-7	6a 5-6
6b 4-6	5b 5-6	6b 5-7
	5c 5-7	6c 5-7
	5d 5-6	6d 5-6
		7a 5-6
49.3c 3-7	50.2c 4-7/8	
	11b 4-6	

Y 48 is regular exeept 5a-7a, where we find lines of 5-6/7. Such a cluster eannot be a eoineidence: it must be deliberate. We shall not, therefore, consider these lines as a problematie (and not count them in what follows). Note that there are no other instanees of 5, except perhaps in 44.12e.

The totals are as follows:

norm	4	.	7
—1	12 + 1? (2,6-2,8%)		7 (1,5%)
+ 1	1?		1 + 3? (0,2-0,8%)

The total number of lines is 454.

One notes that 8 out of 13 instances of 3 syllables in the first half line are found in Y 46. If this means that it was deliberate, the other cases could be as well.

The maximum deviation in each half line is at present below 3%. This means that conclusions based on the metre of these lines have 97% ehance of being eorrect.

Y 51

Norm line 7-7. Deviations are:

51.11a 6/7-7
    19c 6-7

It is probable that all lines eonformed to the norm. 11a may have had *Spitamāy⟨a⟩*. 19e is quite unclear. If *mazdā* is a nominative, we would have 5-7; in that case surely a word is missing.

Y 53

This hymn presents more difficulties than the others. Apparently the language of the other hymns is not preserved in the same form; e.g. the gen. pl. ending has /-ām/.

The hymn consists of sequenees of 7 syllables interspersed with lines of 5 syllables. If it is put this way, the aberrant shape of 53.6b is less disturbing: here we have one line of 7 syllables more. A *verse* of 7-7-7-5 between such of 7-5 and 7-7-5 would be quite unaeeeptable.

Lines not presenting 7 or 5 syllables:

53.1d 7/8-7-5 *d(a)ban*
    2a   8-7-5
    3c 7/8/9-7-5 either /*pati*/ or /*vahauš*/ could be left out
    3d 8-7-5
    4a 7/8/9-5 [*vah*]?; *varā*[*ni*]? (ef. *sprdā ni*)
    4b 7-7/8-5

5b   6/7-5 it is ununderstandable why the text does not have *yuśmabya.

5c 7-6-5

6d 7-7-4

7c 7/8-7-5

8c 8-7-5

9b   6-5

The numbers are as follows:

norm				7			5
—1				1 + 1? ⎫			0
+ 1				1? ⎬	1 + 3?		0
+ 2				1? ⎭	(5,5-16,6%)		0
norm	7			7			5
—1	0			1			1
+ 1	3 + 3? ⎫	3 + 4?		0 + 1? ⎫	1 + 1?		0
+ 2	1? ⎭	(16,6-22,2%)		0 ⎭	(5,5-11,1%)		0

(Note that the cases of + 2? are identical with the + 1? cases.) The total number of 'lines' is 36, i.e. 18 of 7-5 and 18 of 7-7-5. (Percentages are given of 18.)

It appears that the deviations are not disturbing. Perhaps 8-7-5 was regular, which would change the picture very much. It is very improbable that there really were elements of 9 syllables.

4. Conclusion

The conclusion is that, if we consider the 7-8 line as a regular variant of the 7-9 one, the difficulties do not outnumber 4% (in each half line), except in Y 53. (Here the percentages are higher, but the certain cases are not much more frequent.) This is a low figure. It is a rather academic question whether one has to assume that all lines originally were correct and that the problems are due to faults in the tradition, or whether we have to assume that there were always a few exceptions at all, only, in most cases not indicated as x/y or with a question mark no emendation seems possible. So either in these cases a word was lost or added, or the text is more seriously in disorder.

Though there are a few uncertain cases, the corrections as a whole are based on the one hand on linguistic considerations that form a consistent system (normally the historical origin of the forms is clear), on the other hand on the fact that forms occurring more than once are acceptable or even ameliorate the metre in all places where they occur. (In this respect

a change from 7-8 to 7-9 cannot be considered decisive, but, as 70% of these lines had 7-9, in each case the possibility that the change is correct is 70%. That is, it can be used as additional evidence.) As the great majority of the corrections is accepted by most scholars, we can conclude that the inferences from the metre have a validity of 90 to 95% (as now the deviations are not greater than 4%).

CHAPTER TWO

THE PHONEMIC SYSTEM

1. *Introduction*

Three main approaches have been followed in studying the language
of the Gāthās. One is that of Morgenstierne 1942, who pointed to the
importance of later Iranian languages for the interpretation of Avestan.
The second is Hoffmann's, who concentrated on the study of the manu-
scripts and the history of the script itself. The third is that of Benveniste
and Kuiper, who stress that Zarathustra's language must have been
more archaic than it looks in the vulgate text.

It is clear that these three approaches do not exclude each other.
Nobody will deny that we have to start from the manuscripts, for they
are our only basis for the text. And it is as clear that we should use
whatever evidence we can find in the system and the history of the script.
Nor should the evidence of later languages from North East Iran be
neglected. On one side we can reconstruct Proto-Indo-Iranian and Proto-
Iranian, and Proto-East-Iranian as distinct from West Iranian; on the
other side we have the Middle and New Iranian languages, and Gathic
must lie in between. At the same time it is probable, whether the Gāthās
date from the ninth or the sixth century BC, that their language was
much closer to Proto-East-Iranian than to Middle Iranian.

It is also probable that the texts were changed in the course of time.
It is generally admitted that the text was laid down in manuscript in the
fourth century AD or later, which is at least a thousand, perhaps almost
1500 years after Zarathustra. In contrast to the Rigveda, where very little
has been changed, it is immediately clear that the text of the Gāthās
shows inconsistencies which prove that it was partly modernized. On the
other hand it should be emphasized that, when we leave aside a few
learned disfigurements, when we realize that the spelling is phonetic to
some extent, and when we accept a superficial modernization, the tradi-
tion of this extremely difficult text is astonishingly reliable and that every
sign or sound must be accounted for when interpreting a form.

There are two other types of fact that prove that Zarathustra's
language was—in some respects—different from the text we have. First,
the metre often shows that we must assume forms different from those
we have. These facts are well known, but this does not make them less
important. Thus *ārmaiti-* must be read /aramati-/ and *daēnā* 'faith' was
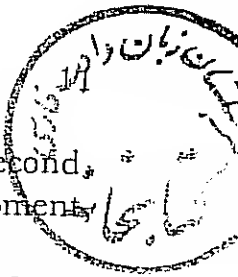
/dayanā/, and the first of these forms has not well been explained. Second, when a form by some chance has escaped from the normal development, it often shows a more archaic state of the language.

The question is just how far we must go back. Using the three forms of evidence mentioned—inconsistencies, the metre and 'escaped' forms—we should try to established which reconstructions are necessary and which are probable. It has been objected to some reconstructions that they make Gathic almost Proto-Iranian. In itself this is no objection: the question is whether it can be shown or made probable that a given reconstruction is correct, and if Gathic then would prove to be very close to Proto-(East-)Iranian, that would not be surprising.

The first step, of course, explicitly put by Benveniste and Morgenstierne, is to reconstruct the phonemic system. It has long since been observed that the Gathic script is to a larger extent phonetic than scripts usually are. Therefore the first step is to reduce the script to a phonemic system. This is easy in those cases where a special sign is used to the exclusion of another in a specific environment. In many cases, however, it is much more difficult. I think that, by combining the three kinds of evidence, it is possible to reconstruct the phonemic system of Gathic. And this is the major difficulty, because there is no reason to assume that the morphology (or the syntax) was changed in the course of the tradition.

Benveniste's article (1968) was too superficial and did not always discuss all the relevant facts. Also, he did not distinguish clearly enough between Gathic and Late Avestan. It cannot be stressed sufficiently that the following treatment is valid for Gathic only. Morgenstierne for example, objects to Benveniste's rendering as */θyajahvati/* what appears in the text as *iθyejaŋuhaiti*. Morgenstierne interprets this form as phonetically *θ'yejanh°ati*, phonemically */θyejanhwati/*. This is an instructive example. Morgenstierne's reconstruction is probably meant for (some stage of) Late Avestan. For Gathic (where the form is not found; but let us assume for a moment it occured there), I think we can demonstrate that *ya* had not yet become *ye*, and that *hv* had not yet changed, so that */θyajahvati/* would be the correct phonemic interpretation. This shows that the phonemic reconstruction given here is valid for Gathic only.

In this chapter, then, we have to establish the phonemic system of Gathic, and we can do so by discussing the sounds indicated by the alphabet. This chapter will be extremely complicated for we have to face several problems at the same time: 1. whether a problem is just a graphic one or a linguistic one; 2. when linguistic change is concerned, whether

it dates from before Zarathustra's time or whether it belongs to the long period of oral tradition after him; 3. and if a form is really Zarathustrian, whether a problem is a phonetic or a phonemic one. It is not possible to treat these problems systematically one after another, for our first task is exactly to disentangle these kinds of problem.

2. *The alphabet*

To find the phonemic system of Gathic it is sufficient to consider the alphabet and to determine which sounds were phonemes and which were not. With the exception of *ng*, which must be considered together with *ŋ*, and the diphtongs *ōi/aē*, *ōu/ao*, there is no reason to consider sequences of signs.

The alphabet indicates the following sounds:

k 𐬐	*g* 𐬔	*x* 𐬑	*x́*[1] 𐬒	*x*[v2] 𐬓	*γ* 𐬖
c 𐬗	*j* 𐬘				
t 𐬙	*ṭ* 𐬚	*d* 𐬛	*θ* 𐬜		*δ* 𐬝
p 𐬞	*b* 𐬠	*f* 𐬟			*β*[3] 𐬡
s 𐬯	*z* 𐬰				
š 𐬱	*ž* 𐬲	*ś* 𐬳	*ṣ* 𐬴		
y[6] 𐬬	*v*[6] 𐬭				
y[7] 𐬬	*v*[7] 𐬍				
h 𐬵					
r 𐬭					

m 𐬨	*m̨* 𐬩	*n* 𐬥	*ń* 𐬦	*ṇ* 𐬧	*ŋ* 𐬢	*ṅ* 𐬣	*ŋ*[v] 𐬤
a 𐬀	*ə* 𐬉	*e* 𐬈	*o* 𐬋	*i* 𐬌	*u* 𐬏		
ā 𐬁	*ə̄* 𐬊	*ē* 𐬉	*ō* 𐬋	*ī* 𐬍	*ū* 𐬎		
å 𐬃	*ą* 𐬅						

1. Formerly *ħ*, *ħ*.
2. Sometimes written *xv*; *xv* always represents the sign *x*[v].
3. Formerly *w*.
4. The sign is transcribed *ś*, as it is a variant of *š*; I propose to write *ś* as this is typographically easier.

5. This sign is transcribed $\check{s}$; I propose to simplify this to $\underset{.}{s}$.
6. On the transcription see §9.
7. Only used initially.

Not included are a few rare signs:

$\dot{g}$ of unknown value;

$\mathring{\delta}$ graphic variant of δ?

$\mathring{a}$ had two signs, $\mathring{a}$ and $\mathring{\ddot{a}}$. As the first only occurs in one manuscript (Pd), the other sign is transcribed simply by $\ddot{a}$;

$\underset{.}{q}$ a variant of q of unknown use;

$\dot{y}$ a variant of y.

A large number of sounds must be discussed:

$\acute{x}$ (older $\hbar$) is a phonetic variant of h before $y +$ a stressed vowel; see §3.

x^v see §4.

β, γ, δ see §5.

$\underline{t}$ is a variant of t; see §6.

$\acute{s}$ see §7.

$\underset{.}{s}$ see §8.

y, v and y-, v- see §9.

$\underset{.}{m}$ m which had become voiceless after h

$\acute{n}$ phonetic variant of n before i, y.

$\underset{.}{n}$ nasal before stops;

η see §11.

$\acute{\eta}$ variant of η before $\bar{e}$ in Gathic (only -a$\acute{\eta}h\bar{e}$, -ye$\acute{\eta}h\bar{e}$). As Gathic had /-ai/ instead of -$\bar{e}$, the $\acute{\eta}$ is not relevant.

η^v is not used in Gathic proper; YH has vaη^vh$\bar{i}m$, vaη^vh$\bar{i}\check{s}$, acc. sg., pl. fem. of voh$\bar{u}$ 'good'. (For the latter Gathic has vaηuh$\bar{i}m$.) See on ngv and ηhv in §§10 and 11.

$\mathring{a}$ see §12.

q see §13.

∂, $\bar{\partial}$ see §14.

e see §15.

$\bar{e}$ see §16.

o see §17.

$\bar{o}$ see §18.

$\bar{o}i$, $a\bar{e}$, $-\bar{e}$ see §19.

$\bar{\partial}u$, ao, $-\bar{o}$ see §20.

On the length of the vowels a, i, u see §21.

The sounds not mentioned are without any doubt phonemes. They are:

p	b	f		m	v	u	$\bar{u}$
t	d	θ		n			
		s	z	r			
c	j	$\check{s}$	$\check{z}$		y	i	$\bar{\imath}$
$\mathring{?}$		h				a	$\bar{a}$

On the ? see §22.

The group s, z, $\check{s}$, $\check{z}$ consists of four phonemes.

z

That z is not an allophone of s but a phoneme is shown by the following oppositions:

zarəm : sarəm, zaoša- : saošyant-, zavah- : savah-, zrazdā : sravah-, zū- : sū-; azām : asanō, mazā : pasəuš, gərazōi : x^{v}əng.darəsōi /grzai : -darsai/, gūzrā : usən, hizvā : isē, isvā.

The historical origin is the development PIE $\acute{k} > s$; $\acute{g}$, $\acute{g}h > z$.

$\check{s}$

$\check{s}$ is not an allophone of s. Compare:

išāt : isāi, vīštāspa- : vīspa-, zōišənū : mōist, vaēšō : urvaēsē, zaoša- : xraosəntąm, rašnā : yasna-, fšuyant- : fsəratuš.

Here again the main historical origin is the rise of a new $s < PIE$ $\acute{k}$ (which was not changed into $\check{s}$ after i, u, r, k).

Note that initial $\check{s}$- became $x\check{s}$-. As this development is automatic, it can phonemically be noted as /$\check{s}$-/.

$\check{z}$

$\check{z}$ is not an allophone of z, as appears from:

āžuš : āzūitiš, āždyāi /aždyāi/ : azdā, važdra- : vazdvarə, vōiždat : vōizdūm.

The historical explanation is the development $\acute{g}d > \check{z}d$ and $dd > zd$.

3. $\acute{x}$

This sound is discussed in the chapter on the accent. It is shown that it occurs only before y, when the stress immediately followed. It is probable that this rule was still fully automatic in Gathic, if it was not post-Gathic, so that $\acute{x}$ was not a phoneme but an allophone of h.

4. x^v

As -hv- is everywhere else preserved, $namax^vaitī\check{s}$ and $sax^vār\bar{a}$, $sāx^v\bar{a}n\bar{\imath}$ should probably have been written with hv ($du\check{s}.x^var\partial\theta\bar{a}m$ has x^v from the simplex.) Elsewhere x^v is found only initially.

We find x^v- and hv- thus:

x^v- < hv-	x^v- < $hu\partial$-	hv-
x^va-	$x^varai\theta ya$- /$hu\partial ar\theta iya$-/	$hua\eta hav\bar{\imath}m$ /$hu\partial ahav$-/
$x^va\bar{e}la$-	$x^v\bar{a}\theta ra$- /$hu\partial\bar{a}\theta ra$-/	$hvar\partial$- /$hu\partial ar$/
$x^va\bar{e}tu$-	$x^v\bar{a}\theta r\bar{o}y\bar{a}$ /$hu\partial\bar{a}\theta ray\bar{a}$/?	$hvar\check{s}ta$- /$huvr\check{s}ta$-/
x^vafna-	$x^v\bar{a}ng$ /$hu\partial anh$/	$hv\bar{a}pah$- /$hu\partial\bar{a}pah$-/
$x^vai\theta ya$-	$x^v\bar{\imath}ti$- /$hu\partial it\bar{\imath}$-/	$hv\bar{o}$ /hau/
x^var-		$hv\bar{o}.gva$- /hau-/
$x^var\partial\theta a$-		
$x^v\bar{a}pai\theta ya$-		

$x^va\bar{e}na$-
$x^var\partial nah$-

The last two words ($x^va\bar{e}na$- etc.) have no etymology. The forms with $hv\bar{o}$- are not relevant, as they had /hau-/ in Avestan.

PIE $s\underset{\cdot}{u}$-, Ir. hv-, always gave x^v- (and so written hv- always represents /hu-/). This means that there is no problem for Gathic. There were forms with /hu-/ (that is hu- before consonant, laryngeal included; see IV 53.3), which was a sequence of two phonemes. And there were forms with x^v-, which is a variant of hv- (that is /hu-/ before vowel). There is, then, no need to assume a separate phoneme x^v.

The way in which the forms are written gives a problem, but it concerns post-Gathic developments. The problem is when /hu-/ before laryngeal became x^v- and when it became hv-. If the accentuation of the PIE word for 'sun' was *$su\partial ar$ (Skt. $sv\grave{a}r$), gen. *$su\partial \acute{a}ns$, the accent migh have been the decisive factor, cf. $hvar\bar{a}$, gen. $x^v\bar{a}ng$.

5. β, γ, δ.

β, γ, δ are voiced spirants. They are found in Gathic:
1. after voiceless spirants (f, θ, x);
   a. $\theta\beta$ < θv;
   b. $x\delta$, $f\delta$ < $x\theta$, $f\theta$.
   γ is not found in this position in Gathic;
2. $\beta\check{z}$, $\gamma\check{z}$ < bz, gz ($\check{z}$ from z after labials and gutturals).

Ad 1a.

xraθβā < **xratu̯ā*, Is. of *xratu-*; *ərəθβa-* 'worthy' (cf. Skt. *rtvam?*); *θβa-* 'your' (Skt. *tva-*); *θβaxšah-* 'care' (Skt. *tvákṣas-*).

Ad 1b.

uxδa- 'word' (Skt. *ukthá-*); *vaxəδra-* 'speech' < **vaxθra-* < **vak-tra-*; *fəδrōi* Ds. of 'father' from **fθrai* < **ptrai*.

A group of three consonants is split up by a svarabhakti vowel between the first two consonants.

The development *xθ* > *xδ* is problematic, because nothing comparable is found in any other Iranian language.

Ad 2. (β, γ before *ž*)

All forms are the result of Bartholomae's law.

diβžaidyāi < *-bza-* < *-bh-sa-*, a desiderative in *-sa-*;
mimaγžō < *-gza-* < **mi-mngh-sa-*, desid.;
pairyaoγža < **-augh-sa* 'you said'.
On *aγžaonvamna-* see IV 37.

Conclusion. *βž*, *γž* are allophones of *bž*, *gž*. In the same way *xδ*, *fδ* are allophones of *xθ*, *fθ*. They can only be considered as allophones of *xd*, *fd* (as Morgenstierne proposes) after intervocalic *d* had become *δ*, but this is a Late Avestan development. *θβ* is an allophone of *θv*. Though *β* also occurs before *ž*, a phonemc *β* that occurs only before or after specific consonants is impossible. There were, then, no phonemes *β*, *γ*, *δ*.

6. ṭ

ṭ is a variant of *t*, found:
1. in word final position;
2. in *ṭkaēša-* 'false faith' and 'teacher of -'.

Ad 1.

nōiṭ, mōiθaṭ, fraoraṭ, paityaogaṭ, etc.
It is not found after *s* or *š*: *mōist, cōišt, tāšt.*

Ad 2.

On *ṭkaēša-* see IV 37

It is generally assumed that it was a *t* of which only the 'implosion' i.e. the closing of the air-canal, was realized, not the 'explosion'. (The term 'implosive' should not be understood in the sense that it was spoken with the air being drawn inward.) In LAv. *ṭb-* it would then be hardly audible (where as a matter of fact it was soon lost). In any case it was a very lightly pronounced *t*. It must have been more clearly pronounced after *s*, *š*.

Of course, ṭ is an allophone of *t*.

7. *ś*

ś continues.

1. *c* before *i̯*;
2. the sound traditionally reconstructed as *k̑þ* (see IV 37).

Ad 1.

śyaoθ(a)na- 'work' (Skt. *cyautna-*); *śyavāi* 1st sub. of *śyu-* 'activate' (Skt. *cyávati*). .

Ad 2.

śōiθra- 'dwelling place' (Skt. *kṣetra-*).

The *ś* in 1. can be considered as an allophone of *s* before *y*. Later *sy* became single *ś*. At that moment *ś* was a phoneme, but this development is post-Gathic as it is still often written *sy*.

The development in 2. is not well documented: only *śōiθra-* is written thus, four times in one manuscript. When through the development *sy*⟩*ś* the *ś* became a phoneme, the outcome of the cluster apparently was not identified with it, as it is normally written *s*. Therefore I think that *śōiθra-* is not reliable.

Thus only 1. remains, where *ś* is not a phoneme.

8. *ṣ* and *hr*

These sounds are discussed in the chapter on the accent. *ṣ* arose from *rt*, and *hr* from *r* before *p* or *k*, when the syllable with the *r* was stressed. It is argued that this development was still automatic in Gathic, so that *ṣ* was not a phoneme (nor was *hr*). It will be described as *r̓t* or *-r̓t* etc.

9. *y* and *v*

What is transcribed *y*, *v* was written *ii*, *uu*. It has been pointed out that this notation meant [*i̯i̯*, *u̯u̯*]. This notation is due to a development in West Iranian, where *i̯*, *u̯* after consonant (and even between vowels) had developed into [*i̯i̯*, *u̯u̯*].

Gathic had in these cases [*i̯*, *u̯*], but sometimes [*i̯i̯*, *u̯u̯*] (These forms actually had *iʔ*, *uʔ* except when *i̯i̯*, *u̯u̯* were due to Sievers' law, see IV 634c.) Recently it had been suggested to transcribe with *ii*, *uu* instead of *y*, *v*. This is closer to the manuscript text, but it is mostly farther removed from the Gathic reality, and it is, especially between vowels, unpleasant reading. Therefore we retain *y*, *v*, also because of the parallelism with the Indo-Aryan forms.

It should be pointed out here that when, e.g. *uii* (*uy*) must stand for **uuii* (**vy*), the transcription *uii* does not solve the problem. Emendation is necessary in both cases, either to **uuii* or to **vy*. The first transcription

makes it easier to understand. Such cases, however, are a small minority of the total occurrences of y, v.

Initial $i̯$-, $u̯$- are written with special signs. ii- and uu- also occur initially, representing $ii̯$-, $uu̯$-, not $i̯$-, $u̯$-. The distinction between the two notations, therefore, is relevant, but such cases are extremely rare, and they do not occur in the Gāthās. (In these cases $ii̯$-, $uu̯$- should be used.)

10 ng

ng seems often a graphic variant of $ŋ$. We must therefore also consider whether ng indicates a phoneme.

ng is found in:

1. -$ā̊ngh$-, -$ā̊ng$;
2. $nghv$;
3. ngr.

Ad 1.

PII -ans- > PIr. -anh- appears as -$ā̊ngh$-, word final -$ā̊ng$.
$sā̊ngha$- 'teaching', Skt. $śaṁs$-.
$vā̊nghat̰$ s-aor. sub. of van-, Skt. $vaṁsat$.
$dā̊ng$ Gs of dam- 'house'.
-$ā̊ng$ Ap ending of the a-stems.
In this case Gathic has consistently ngh, whereas LAv. has $ŋh$ (which is found sometimes as a variant in the Gāthās); ($nŋh$ is a mixed form). The forms are:
$fšā̊nghya$-
$jā̊nghatī$ (gam-)
$mā̊nghī$ $mā̊ŋhī$ (man-), $mā̊nghāi$
$sā̊ngha$-, $sā̊nghu$-
$vā̊ngh$- $vā̊nŋh$-
$cyanghat̰$ (with a for $ā̊$ after y)
Final $dā̊ng$, $x^vā̊ng$, Ap. -$ā̊ng$ (on $yā̊ngstū$ see 14.8b), $cašmā̊ng$.
The consequent distinction between ngh < ns and $ŋh$ < s, which is not found in LAv. (which has only $ŋh$), indicates a Gathic reality. A further difference between the two cases is found in the preceding vowel: we find always -$ā̊ngh$- but -$aŋh$-. The $ā̊$, as well as the notation with an n, shows that Gathic here still had a nasal. Therefore, ngh can be interpreted as the phonetic representation of the phonemic sequence /nh/,

Word final -$ā̊ng$ is more difficult. It seems not advisable to assume a separate phoneme for this ending. Therefore I interpret it as /-anh/, assuming that -h had not yet disappeared. (If it had disappeared, one might interpret -$ā̊ng$ phonemically as /-ang/, just as the spelling indicates; in Gathic there is no reason to identify ng with $ŋ$.)

Ad 2. (nghv)

We shall see that this sequence indicated Gathic *-hv-*. This group is mostly written *ŋuh, (n)ŋhv*, which is discussed in §11. *nghv* looks like a 'Gathicizing' notation. It can be disregarded here.

Ad 3. (ngr)

In *angra-* and *dangra-* we find *ng*. These words continue **ahra-, *dahra-*. As these forms do not have *ə* from *a*, the *ng* is probably hyper-Gathic spelling (*ng* being typically Gathic) for (Lav.)* (*d*)*aŋra-*. The words may be interpreted as /(*d*)*ahra-*/.

11. ŋ

ŋ is found:

1. in *-aŋha-, aŋhu-* and *-ăŋha-*;
2. in *ŋuh-V, ŋhu-C, ŋhv, nŋhv*;
3. in *ə̄ŋh, ə̄nŋh*.

Ad 1.

aŋha < **aha* (and *ăŋha* < *āha*) is regular:

Gs *manaŋhō*, Is *manaŋhā* from *manah-*, but *manahi*; *aŋhat̯* sub. of *ah-* 'to be'; *ăŋhō* < **āh-as* Gs 'mouth'; *aŋhavas-* 'lords', but *ahū*.

This development is older than *au* > *ə̄u* (*vaŋhə̄uš* Gs 'good'), *-ai* > *-ē* (*nipə̆ŋhē* < **-pāhai* 'you protect'). Note *rāšayeŋhē* with *ya* > *ye* after *-ai* had become *-ē* (on *ŋ̊h* see §2).

In a few cases *ŋh* is found in forms with following *u*: *aŋhuš* (nom. sg., twice) but *ahūm* (acc., 11 times). (The idea that *ahūm* was dissimilated from **aŋhūm* is improbable and unnecessary.)

The forms of *vahu-* 'good' are instructive:

NAs   n. *vohū* 7
G   *vaŋhə̄uš* passim
D   *vaŋhaovē* 1
I   *vohū* passim
L   *vaŋhāu* 5
Ap *vaŋhūš* YH 1   n. *vohū* 1
G   *vohunąm* YH 1
Cf. *vaŋhudā* YH.

We find both *vohu(-)* and *vaŋhu-*. Evidently the forms that got *ŋh* before *u* did not get *o* from *a*. On the other hand, where *a* had become *o*, the *ŋh* was never introduced. This means that some forms became *vaŋhu-* and that the forms that had remained *vahu-* later became *vohu-*. As it is very improbable that *ŋh* was secondarily introduced in some forms of *vahu-* and not in others, Gathic will have had *vahu-* everywhere, which was later

either changed into *vaŋhu-* (which probably was never a linguistic reality) or into *vohu-* according to a later regular phonetic development.

Ad 2. (*ŋhv* etc.)

aŋuhīš-cā /ahvīs/ Npf of *ahu-* 'lord';
vaŋuhīm, vaŋhuyā /vahviyam, -iyā/ fem. of /vahu-/ 'good';
aojōŋhvantəm /aujahvantam/ (cf. *aojōnghvat̰*);
cazdōnŋhvadbyō /cazdahvad-/ (cf. *cazdōnghvantəm*).

Evidently *ŋuh-V* and *ŋhu-C* are attempts to express one soundgroup, for which (later) also *ŋᵛh* was used, with one sign for a labialized *ŋ*. The metre shows that *ŋuh/ŋhu* was non-syllabic.

In Gathic *-hv-*, which these spellings continue, was still retained, as appears from *ahvāhū* Lp of *ahva-*, *gušahvā* imp. M., *ahvā* from *ah-* 'to be', *miθahvacā* 'whose words are false'. Therefore the spellings with *ŋ* are a later intrusion.

Ad 3. (*āŋh*)

āŋh, āŋŋh are alternatives for normal *āngh*; see §10.
Conclusion If **aha > aŋha* is already Gathic, *ŋh* is an allophone of *h* between *ă*'s. The few forms before *u* are probably not Gathic, perhaps not a linguistic reality at all. This development has no parallels in any Iranian language.

12. *ă*

ă is found:

1. in *-ăŋh-*
2. final *-ă*
3. *-ăs-cā* etc.
4. in *hudăbyō*
5. in *-ănt-*
6. *xrată, pərətă*

Ad 1.

-ăŋha- continues **-āha-*. (Forms in *-ō, -ōi, -ē* had earlier *-ah, -ai*.)
stăŋhat̰ 3sg sub. s-aor. of *stā-*, < **stā-h-at̰*.
răŋhaŋhōi 2sg sub s-aor. M of *rā-*, **rā-h-a-hai*.
dăŋhā 2sg ind. aor. M of *dā-*, **dā-ha*.
-ăŋhō Np of *a*-stems: *ahurăŋhō, mašyăŋhō*.
s-stems: Gs *dăŋhō, yăŋhō*.
nipăŋhē 2sg ind. pres. M of *pā-*, **-pā-hai*.

Ad 2. (final *-ă*)

-ă < **-āh* < **-ās* is very frequent and without exception.
NApf of *ā*-stems: *aspă, daēnă, gaēθă*.

NApn of *s*-stems: *dvaēšǎ, manǎ, raocǎ.*
Nsmf of *s*-stem adjectives: *aojǎ, əvīdvǎ, hvāpǎ.*
dadǎ, dǎ 2sg pres., aor. of *dā.*
A few forms in *-ǎ* had disyllabic *-ǎ*: *dǎ* 'gift' /daʔah/, *mazdǎ* Gs /mazdaʔah/, *mǎ* 'month' /maʔah/.

Ad. 3. (*-ǎs-*)

-ǎs- have the forms in *-ǎ* if they are followed by *-cā* or another clitic.
NApf of *ā*-stems: *daēnās-cā.*
NApn of *s*-stems: *raocǎs-cā, nabǎs-cā*
mazdǎs-cā
dǎs-tū
haurvǎs-cā, aməra(ta)tǎs-cā etc. do not belong to this group as the Ns is *haurvatās.*

Non-final *-ās-* did not become *-ǎs-*: *sāstī, sāstū, sāstar-, sāsnā-, vāstar-, yāsa-* (pres. of *yā*), *rāstī, nǝnāsā* (pf. of *nas-* 'disappear'). (Nor did *-āz-*: *sāzdūm, θrāzdūm, urvāzā, vāza-, vāzišta-.*) Nor did final *-ās* when *-s* was retained: we have *haurvatās,* where the *-s* was retained because it derives from **-tāts. (-s* is further preserved in *as* 'you were', if this was **aʔas.* But the interpretation is uncertain.) Therefore the forms in *-ǎs-cā* etc. must have *-ǎ-* analogically. (It cannot be due to the secondary accent caused by the enclitic.) This is confirmed by *ākāstǝ̄ng* against *ākǎ.* Here the form was not easily analysable. (It is not clear to us either what form it is.) The form proves that Gathic had /-āsca/. *aməratatǎs-cā* is a clear instance of analogical *-ǎs-*: the nominative has (*haurva*)*tās* and there is no way to explain *-ǎscā* but as due to *-ǎscā* of the other forms.

Ad 4. (*hudǎbyō*)

hudǎbyō is from **hu-daʔah-.* We expect **hu-daʔazbyah.* The *-z-* was replaced by *-h-* (probably already in PII; cf. *raocǝ̄biš* for **raucazbiš*). As Gathic had disyllabic /-aʔa-/, the *-ǎ-* is of later date.

Ad 5. (*-ǎnt-*)

-ǎnt- < *-ānt-* have (all forms):
išǎntī 3pl sub. of *iš-* urge, /išaʔanti/.
bairyǎntē 3pl sub. pass., /baryaʔantai/.
dǎntē 3 pl. sub. M of *dā-,* /daʔantai/.
hacǎntē 3 pl. sub. M of *hac-,* /hacaʔantai/.
As all forms still had /-aʔa-/ in Gathic, the group *-ǎnt-* does not concern us.

The 2 pl. ind. pres. of *xšnā-* 'to know', *zānatā,* for **zānǝtā* /zāntā/, is curious in having *-ānt-* and in showing a vowel between *n* and *t,* which is found nowhere else. The *ā* is introduced analogically (**gn̥-n-H-ta >*

*zanta, cf. Skt. *jānīta*) from the participle *zāta-*. In the singular, *zānā-*, this was no problem. In the plural we would expect *zāntā* from *zāntā*. We must assume either that *zānta* was restored to *zānta*, or that the *ā* was introduced after *ānt* had become *ånt*. The latter seems improbable (as Sanskrit also has *ā*, it could even be PII.). If the *ā* was restored, the *nt* was split up by people who realized *ānt* as *ånt*.

Ad 6. (*xratå*)

xratå 48.4d and *paratå* 51.13b are locatives. These forms probably represent /xratāu/ etc., cf. Skt. *kratau*. That -*āu* was preserved in Gathic is shown by *vaŋhāu*. Y 51.12a has *parato* in the same function. This form may be due to the surrounding forms in -*ō*, or it has the locative ending in short -*au*.

Conclusion Only 1. -*åŋha-* and 2. -*å* appear to be relevant. As *aŋha* does not require a phoneme *ŋh* but is a realization of /aha/, in the same way *åŋha* is the phonetic realization of phonemic /āha/. Then it is evident to assume that -*å* is the realization of /-āh/, with retained -*h* (for which see §18.1).

13. *ą*

The sign *ą* is found:
1. before the spirants *s, z, θ*;
2. before *š, ž*;
3. -*ąm, -ąn* < *-*ām*, **-ān*;
4. -*ąm-, -ąn-* in a few words (other than 5.);
5. -*ąnm-*.

Ad 1.

Ns pte. -*ąs*: *hąs* (*ah-* 'to be'), *parasąs* ('to ask') etc.
-*ąs-cā* Ap of *a*-stems;
ąsa- 'part';
nąsat red. aor. of *nas-* 'attain';
vąs 3sg *s*-aor. of *van-* 'overcome' (< *vāns-t*).
dəbązah- 'support';
mąθra-, Skt. *mántra-*.

Ad 2.

narąš Ap of *nar-* 'man', *ņ̥-ns*;
marąšyāt opt. of *mrc-* 'destroy', *maranšyā- < *mŗnc-yā-*.
It seems that *ą* here represents a nasalized *ə*.

Ad 3. (-*ąm, -ąn*)

Final *-*ām*, *-ān* always became -*ąm, -ąn*.
-*ąm* Asf. of *ā*-stems;

-ąm Gp ending;

-mąm NApn of *man*-stems;

-tąm 2pl imp. M ending.

Some of these forms still had /-aʔam/ in Gathic:

-ąm Gp. ending;

mazdąm As /*mazdaʔam*/;

dyąm 1sg opt. of *dā-*, /*dyaʔam*/.

We cannot be certain that this proves that -ām > -ąm was post-Gathic, as -ām < -aʔam may have had the same development as older -ām before, but it makes it probable.

Ad 4. (-ąn-, -ąm-)

-ān- > -ąn- is found only in the following forms:

bąnayən caus. /*bānayan*/;

dąmiš, -*īm* 'creative, creator' (but *dāmōiš*);

mąnarōiš < **māmraiš?*

rąnayā̊ Gd (but *rānōibyā*, -*byō*);

urvąnəm, -*nō* As, Np (but *urvānē*, YH *urvānəm*).

On the other hand we have a dozen forms with -ām- and some twenty with -ān-: *dəjāmāspa-*, *spitāma-*, *dāman-*, *kāma-*, *nāman-*, *rāman-*, *å̊ŋhāma*, *jvāmahī*, *nāšāmā*, *avāmī*; *apāna-*, *avaŋhāna-*, *dəmāna-*, *hudānu-*, *mąθrānē*, *ustāna-*, *yāna-*. Therefore, in this case I conclude that the nasalization is a (late?) phonetic tendency and that Gathic had phonemic /ām, ān/.

Ad 5. (ąnm)

-anN- (and -ānN-?) became -ąnN-. Only in:

ąnman- 'spirit';

dvąnman- 'cloud' (L. *dunman-*);

xšąnmənē

YH *fryąnmahī*, *hvąnmahī*.

As LAv. *dunman-* presupposes *u* < *və*, i.e. **dvənman-*, *ą* here represents a nasal *ə*, [ə̃] Phonemically it can be interpreted as /-anm-/. *fryąn-* may be /*friʔan-*/ < **priH-n̥-*, rather than /*frin-*/.

Conclusion As all developments are fully conditioned, it is not necessary to assume nasalized phonemes. In the case of -ərąš, we must posit /-rnš/. A nasalized *r̥* as a separate phoneme is improbable because there are no other nasalized phonemes, and because *r̥* is not a phoneme (it is an allophone of /r/). Decisive is that there is no opposition between *r̥* and *r̥n*. (It requires that the sound law *s* > *š* after *r* also operates with intervening nasal, but this is no difficulty.

14. ə, ə̄

The sign ə occurs:

1. in ərə, which indicates a vocalic /r/;
2. after final r;
3. as prop vowel a. in rəC
   b. in CəC (first C other than r);
4. in ə̄u < *au
5. in əvi < *avi;
6. in ən, əm < *an, am
   a. -ə̆m, -ə̆n
   b. ən-V, ən-C
      əm-V, əm-C
   c. -ə̄ngh-, -ə̄ng
7. -ə̄ < *-ah
8. a number of special cases.

Ad 1, ərə

ərə indicated the phonetic realization of vocalic r, which is an allophone of (consonantal)-r; as it is not necessary to indicate the vocalic allophone and as this is typographically easier, we shall simply write /r/.

amərətatāt- /amrtatāt-/;

cikōitərəš /cikaitrš/;

dərəta- /drta-/;

ərəš /rš/;

vərəd- /vrd-/.

After labial the first ə is sometimes written ō:

mōrənda- /mrnda-/; θβōrəštā /θvrštā/.

After a vowel, when r is vocalic because it stands after a laryngeal, only rə is written:

rārəšya- /raʔršya-/.

frōrəti- must be /fraʔrti-/ (LAv. has frərəti-);

uzirəidyāi /uz iʔrdyāi/ < *HiHrdyāi;

ārəšvā if /ā ršva/ 33.12a.

It is not clear why ātrəm /ātrm/ is written thus, instead of *atərəm. The t shows that the r was syllabic, or otherwise it would have become θ, as in gen. sg. āθrō. In LAv. rə is found more often. This notation is also found after -v- in inlaut, which is written o: fraorət /fravrt/. (It seems that vərə became vrə, which gave a (post-Gathic) syllabification [frau-rət].)

It has been argued that r̥ had become ər in Avestan, and that the second ə of ərə is the normal glide after r before consonant. I see no basis for this assumption. Against it I see two indications.

One is ātrəm, and the notation rə sometimes found in LAv.

Secondly, the sequence r + laryngeal (rH) resulted in *ar*. The difference *ər* : *ar* is rather one of vocalic *r* : vowel + *r* as in Old Persian and Sanskrit (r : *ir*, *īr*) than one between two different vowels.

Anyhow, *ərə* can be interpreted as /r/, more easily than as *ə* + *r*.

On *ərą* see §13.2.

On /r/ > *ar* see IV 61a.

On *rt* > *š* see §8.

A (subphonemic) voiceless /r/ is written with a preceding *h*, *əhr*: *kəhrpəm*; see §8.

ərəi is [r] followed by *i*-epenthesis.

Ad 2. (-*rə*)

Every word final *r* is written -*rə̄* (with -*ə̄* written long, as are all final vowels, except *antərə* (twice, *antərə̄* once) and *hanərə*.

ayərə̄, *rāzərə̄*, *.vadərə̄*, 3 pl *ādərə̄*, *åŋhərə̄* etc.

This vowel did not make a syllable; it is not a phoneme.

Ad 3. (*rəC*, *CəC*)

3a. *rC* is written *rəC* with few exceptions. The second consonant can be every consonant except *y*, *v* (*h* and *r* do not occur). This *ə* does not make a syllable; it is not a phoneme.

barətū, *darəga-* 'long', *darəs-* 'see', *garəma-* 'heat'.

The exceptions are:

ārmaiti-	*paršta-* (and *paršti-*?)
kəhrp-	*hām.parštōiš*
aršnavaitīš	*duž.varšta-*, *hvaršta-*
darštōiš	YH *ātarš*

On *kəhrp-* see §8. *ārmaiti-* is unexplained; it must be read /aramati-/. The other forms all have *arš* < **ršš* (in the Gāthās proper only before *t* except *aršnavaitīš*, but this form presents more problems). The non-writing of *ə* is undoubtedly connected with this development, for in LAv. we find the same situation. See IV 61a.

3b. A cluster of consonants is often split up by *ə*. This vowel is not a phoneme. It does not make a syllable. Most frequent are clusters with *m*, *n* or *r* as second consonant, and *db*, *gd*.

dəmāna-, *hudəma-*, *raēxənah-*, *rafənah-*, *fərəs-*, *səraoša-*, *xrūnərąm*, *dəbaomā*, *cagədō*, *dugədar-*.

This *ə* is found in:

clusters of two consonants:

between *g*, *d* and *d*, *b*, *j*;

before nasals, but not regularly (with and without *ə* : *xn*, *xm*, *θn*,.*θm*, *fn*, *šn*, *šm*; only *gən*, *gəm*, *dəm*, *səm*, *zəm*; only *sn*, *nm*, *mn*)

before *r* not frequently
> *fər, sər* beside *fr, sr*
>
> *nər*
>
> only *gr, dr, xr, θr, zr, mr*

on *s, š, ž* before *x, j* see 8a below.

ə is not found (except in the cases mentioned) in:

pt	*fs, fš*
θβ	*γž, βž*
sk, st, sp, sc, zd	*nt, nd, nc*
šk, št, žd	*nm*

clusters of three consonants:
> *skət (āskəitīm), fsər (fsəratū-)*;
>
> *fəδr (fəδrōi), xəδr (vaxəδra-)*;
>
> not when the first or the second consonant is *s* or *š*: *vāstra-, uštra-,*
> *humązdra-, afšman-, dafšnya-,*
>
> *xšt, xšm, xšn*

clusters of four consonants:
> only *xrafstra-*

Ad 4. (*āu*)

Every *āu* represents PII *au, which is also represented as *ao*. *āu* is found only in the gen. sg. of *u*-stems: *-āuš*. See §20.

Ad 5. (*əvi*)

Every sequence *avi* became *əvi*:

əvīdvā, kəvitās-, təviš-.

An *i* raises and palatalizes, but the *v* prevents the palatalization (Morgenstierne).

If *mraoi* 32.14c represents /mravi/, it shows that *avi* had not yet changed in Zarathustra's time.

Ad 6. (*ən, əm*)

6a. Final *-am, -an* everywhere appear as *-ə̆m, ə̆n* (on the length of the vowel see 21.4).

As. of *a*-stems: *-ə̄m*;

As. of cons.-stems: *-ə̄m*;

1sg of athem. stems: *ārəm /ā arəm/*;

azə̄m 'I'; *yūžə̄m* 'you'; *ayə̄m* 'this' etc.

Neuter ptc. *yasō.x́yə̄n, rapə̄n*

6b. In inlaut *am, an* do not always appear as *əm, ən*. We find in the Gāthās proper:

before	V		C		
	ə	a	ə	a	
-n	15	30	7	4	
-nt			23	39	(yent incl.)
-m	13	3	12	9	

(The numbers indicate different stems. These numbers are not very exact, as there are quite a few doubtful cases.)

The first question is whether there is a definable distribution.

-am-. Of the 3 forms -amV- two have -yam-, of the nine forms -amC- 4 have y, 2 v, 1 j preceding (on which see below, but note yāmā 30.3a). The remaining forms are hamaēstārō and kamnafšva-, kamnānar-, where I suppose LAv. forms (hama-, kamna-).

-ant-. We find -ant- after y (11, and 8 with -yent-), v (9), c (2), j (2). After these sounds we always find -a-. Remain the following forms with -ant-: antarə̆, baodantō, dantō, daintī, mantā, mantu-, rapant-.

-an-. Before consonant we have -an- four times. All have -a(i)ny-. (Note varazānyō, which may have ə from varazāna-. Note further that a following v does not have a: spānvat̞, xᵛānvat̞.)

ən/an before vowel shows no distribution. ənV does not occur after special sounds (3 after m), anV (which is twice as frequent) has a few centers (after m 9, v 4 (vən does not occur), initially 4 (ān- 2), p 3 (pən 1)).

We conclude that əm, ən is regular word-finally; that in inlaut before consonant əm, ən are nearly regular; that before vowel əm is almost regular, but that an is more frequent than ən. After y, v, c, j we find a. As these sounds have a raising resp. palatalising effect, the a must be a graphic device: as yə, cə, jə would be pronounced with [i], və with [u], the vowel a had to be written to designate a pronunciation ə.

6c. -əngh-, āng continue *-anh(-). For the forms see §10. Before ng(h) we find always ə for a, with the following exceptions:

a. angra-, dangra-;

b. cyanghat Y 44.12e.

Ad a. We saw that these forms stand for *aŋra-, /ahra-/ etc. This explains why they do not have ə.

Ad b. If the form is correct (its interpretation is not clear or it gives a metrical problem), the a will be due to the y, as in -yant- against -ənt-, §6b.

Ad 7. (-ā̆ < *-ah)

Normally *-ah appears as -ō. We find -ā̆ < *-ah:

1. in the Nsm of pronouns kā̆, yā̆; poss. mā̆, θβā̆, xᵛā̆; encl. nā̆, vā̆. These forms never have -ō in Gathic, which is normal in LAv.

2. in the adverbs *adə̄*, *parə̄*, *tarə̄*, *vasə̄*;
3. in the Ns of *a*-stems *ciθrə̄*, *kāθə̄*;
4. in the Ns of *s*-stems *hazə̄*, *nəmə̄*, *vacə̄*;
5. in the Gs *mazə̄*, *sarə̄*.

Some of these forms also have -*ō* in Gathic:

	GAv. -ə̄	GAv. -ō	LAv.
1. pron.	*kə̄* etc.	–	*kō* etc.
2. adv.	*adə̄* 1	–	–
	parə̄ 2	–	*parō*
	tarə̄ 1	–	*tarō*, *tarə*
	vasə̄ 2	*vasō* 2	*vasō*
3. nouns	*ciθrə̄* 1	–	–
	kāθə̄	–	–
4.	*hazə̄* 1	*hazō* 1	*hazō*
	nəmə̄ 1	–	*nəmō*
	vacə̄ 1	*vacō* 2	*vacō*
5. gen.	*mazə̄* 1	–	–
	sarə̄ 1	*sarō* 1 (Gs/Np)	*sarō*

It is clear that the -*ə̄* is typical of Gathic, -*ō* of late Avestan. Probably we must assume that -*ə̄* was ousted by LAv. -*ō* except in a few cases. It is understandable that the pronouns, which form a clear group, were protected. A formula like *vasə̄ xšaya-* (cf. *vasasə.xšaθra-*) was likewise preserved. (LAv. had *mazant-* in the oblique cases for GAv. *maz-*.)

8. (special cases)

a. *paitišə* etc.
b. *və̄stā*
c. *ə̄ < aa*
d. YH *həbavaintīš*
e. *cəvīštā*
f. YH *vātə̄yāmahī*
g. *at ə̄ vaocat*
h. *ə̄ə*

i. *hācā*
j. *xšnə̄m*
k. *ə̄h/ah*
l. *zəmō /zimah/*
m. *ə < u, drəgvant-*
n. *ə < i, hušəitiš*

Ad a. (*paitišə*)

In a few cases -*ə* functions as a glide between two words, mostly after and/or before a sibilant: *paitišə sax̌yāt* 44.9c, *huzə̄ntušə spəntō* 43.3e, *yə̄mə spašuθā* 53.6b, *azə̄ sarədanā* 43.14d, and in a compound *vasasə.xšaθra-*. (Note that this -*ə* is often short.) It is clear that this sound has no phonemic value.

Ad 8b. (*vāstā*)

vāstā is a contamination of *vā* and the sandhi form **vāstā*, cf. *yāṅgstū* (from *yāṅg* and *yas-*).

Ad 8c. (*ā̆* < *aa*)

ā̆ continues *ā* in *x́yā̆m*, *strā̆m-cā*, but both have disyllabic *aʔa* according to the metre, so *ā̆* is irrelevant for Gathic. How *ā̆* originated in these forms is unexplained.

Ad 8d. (YH *hā̆bavaintīš*)

YH *hā̆bavaintīš* stands for /*ham b.*/ Why the *m* was lost is not clear. The text must have had **hamb-*, with *ə* according to §6.

Ad 8e. (*cavīštā*)

cavīštā 2pl root aor., *cavīšī* pass. aor. must have had /*caiš-*/. We expect *cōiš-* (or **caēš-*). The form must have been transformed artificially. As LAv. *yōišta-* 'youngest' must represent **yavišta-*, which would have been **yəvišta-* in GAv., the editors probably thought that *ōi* replaced Gathic *əvi*. This *ə*, then, is irrelevant.

Ad 8f. (YH *vātə̄yāmahī*)

YH *vātə̄yāmahī* has *ə̄* from *a*. In Gathic this was still *a*, as *-ay-* is mostly preserved (cf. §18 on *ōy*). YH *vātə̄yōtū* presupposes **vātə̄yōtū* with *ə̄* > *ō* through influence of the following *ō*; see 18.6 and 7.

Ad 8g. (*at̰ ā̆ vaocat̰*)

29.6a has *at̰ ā̆ vaocat̰*. There have been three interpretations. 1. /*avaucat̰*/ is improbable, as augment is rare and as it is not clear why *a-* would have become *ā̆*. 2. Read *at̰.ā̆* as /*atah*/ 'thereupon', Skt. *átas*. The *-ā̆* then belongs to section 7 above. But Avestan has no such forms in *-ah*. 3. *ā̆* is /*ah*/, nom. sg. of the pronoun *a-*. Uncertain.

Ad 8h. (*ā̆ə*)

ā̆ə is found initially in *ā̆ənū*, *ā̆əvā*, *ā̆əṅhā*, where it has no phonological value (cf. *əṅhō*). YH *ā̆ədū* has been interpreted as (*tat*)*ā̆ at̰ ū*. Probably *-ā̆* was the end of a preceding word, the second *ə* a kind of offglide to the next word beginning with a vowel. In *bā̆əduš* its value is unknown (but it can hardly have been anything else but *a* or *ā*).

Ad 8i. (*hā̆cā*)

hā̆cā 46.1c is not explained. See X 16.

Ad 8j. (*xšnā̆m*)

Not clear either is *xšnā̆m/xšnūm* 48.12b, 53.2b.

Ad 8k. (*āh/ah*)

In some forms we find *āh* < *ah*: *āhmā* 'us', *grāhma-*. In some forms the *h* seems lost: *tarāmaitīm* 'opposition', *manə̄.vistāiš* (doubtful), *raocāvīš*, YH *vacābīš*. In other forms *ah* is retained: *ahmat̰*, *ahmāka-*, *kahmāi* etc., *dahma-*, *vahma-*, *vahyah-*. Cf. -*ah* > -*ə̄*. As LAv. has -*ah*-, *ah* was probably introduced from there.

Ad 8l. (*zəmō*)

ə for *i* is probably found in *zəmō* 51.12a, if this is the gen. sg. of 'winter', /*zimah*/. (The metre shows that it must be this word.) Here, as well as in LAv. occurrences, the manuscripts also give -*i*-. *i*, *u* > *ə* is quite common in modern East Iranian languages, so it will be a late intrusion in Avestan.

Ad 8m. (*drəgvant-*)

drəgvant- has *ə* for *u*. It could be a development parallel to that of 8n, with *u* > *əu* > *ə*. LAv. has *drvå* /*druvå*/ < **druɣvå*, which suggests that *u* was still present there, but it is possible that *əɣv* > *əv* became *uv*. *ə* for *u* has also been supposed for YH *bəzvant-*, but the form has no etymology (it has been connected with Skt. *bahú-*). It is supposed that *u* was dissimilated before *v*, but this is phonetically not very probable. Also in *hunuš* 51.10b there is no dissimilation. In YH *surunvant ərə* was even coloured to *uru*. I think the form is not a linguistic reality. Cf. the preceding section.

Ad 8n. (*hušəitiš*)

əi instead of *i* before *i*, *y* is found:
ānəitī /*anitī*/;
hušəitiš, -*īš* against *hušitōiš*.
I have no explanation for this phenomenon. It is clearly subphonemic. It could be that the *i* is epenthetic, and that (*an*)*iⁱ(ti-)* was dissimilated into *əi*.

Whether *ušəurū* shows the same phenomenon is uncertain. Another case form is *ušuruyē*. The forms are unidentified. I they stand for /*ušru-*/, they may have *ə* as a glide, either with *u*-epenthesis or with *ə* changed into *u*.

Conclusion

In 1, 2 and 3 *ə* is clearly not a phoneme. In 4-7 it is a variant of *a*. More complicated is 8.

8a-h are not relevant, i and j are of uncertain interpretation. In k it is an allophone of *a* (if Gathic really had *āh*). l is no problem.

Remain m. and n. Of the development in m. *drəgvant-* is the only certain instance in all Avestan. That in n. (*i* > *ə* before *i*) has a few instances in LAv. too (*Həndu-*; and some forms in -*š-əmna-* for -*šimna-* for -*šyəmna-*).

All three phenomena are of a type, the colouring of vowels, which is typical LAv., but which is mostly absent from Gathic. Also for LAv. these forms (and a few more instances of *i* > *ə* before *i*) are the only reason for Morgenstierne to consider *ə* a phoneme. So they must be later intrusions.

15. *e*

The *e* is found only after *y* when the following syllable contains *i, ē, y* or *c, j*, where it replaces older *a*. (Often we find *ei* with epenthesis).

uxšyeitī, srāvahyeitī	šyeitibyō
ādīvyeintī	vərəzyeidyāi
mainyetē, zbayentē	gayehyā, xšayehī
fšuyentē	rāšayeŋhē, yesnē
ašā.yecā < *ašāya-ca Ds	iθyejō

Before *c* and *j* only the two forms given are found.

Following *aē* (and *ōi*) does not cause this change: *fšuyantaē-cā.*

daibišyantē ptc. also does not show *ye* (perhaps restored after the other case forms).

Intervening *v* seems to prevent the development: *yavē.*

θβōi.ahī 34.11c continues *θβayahi.* This form was split up, and it shows that at that time the *a* was not yet changed. Therefore the development *ya* > *ye* was post-Zarathustrian.

In *θrāyōidyāi ō* must replace *a* (not *e*). This proves that there was no development *ya* > *ye* until the time when this form got *ō* (which was certainly after Zarathustra).

Long *ā* is not changed: *ufyānī*, but *ayenī* 1sg sub. of *i-* 'go' must represent *ayāni.*

Final *-ya* appears as *-ē* (< *-ye*) in *Zaraθuštrahē* 53.1a.3b, which is an intrusion from LAv.; Gathic has *-ahyā.* YH *vahehīš* < *vahyahīš* has the same development. However, it is improbable that in the YH, so soon after the Gatha's, not only *ya* had become *ye*, but even *y* had disappeared.

16. *ē*

ē is found:

1. in *aē*;
2. in *-ē*;
3. once in *-yē* < *-yā.*

Ad 1 and 2 see section 19 on *ōi, aē, -ē.*

Ad 3. Final *-yā* appears as *-yē* in *paouruyē* 44.19d Nsf < *parviyā.* Normal is *-yā*: *vaintyā, vāstryā, vaŋhuyā, xšayā, anyā, aŋhayā*, so it will be a late intrusion.

As 3. can be neglected, and in 1. the *ē* is not a separate phoneme, its status is determined by 2; see section 19.

17. *o*

The sign *o* is found:
1. in *ao*; see §20 on *ə̄u, ao, -ō*;
2. after labial before a syllable with *u*.

Ad 2.

In this position it stands for *a*. Often combined with epenthesis.
mošu- 'soon', Skt. *makṣū́*.
pourūš 'many' Apm, cf. Gs *paraoš*.
vohū, Gs *vaŋhə̄uš*.
vourucašānē 'far seeing'.

In *paourvīm* with following *v* (not *u*) this development has gone not so far, which is expressed by *ao*. (It is not found after non-labials, cf. *taurvayāmā*. In *paurvatātəm* it is not found at all, nor in *spə̄nvaṯ, bə̄ndvō*, where *an > ən* may have been earlier and have prevented *a > o*.)

As this colouring is exactly conditioned, it is not phonemic. There was no phoneme *o*. (Nor does *ao* require a phoneme *o*.) The forms cited are the only instances, and there are more forms with *a* retained: *pasūš, spašuθā, mantū, mainyu-, vafuš, vayū-bərədubyō, vīvaŋhušō* (YH *pasuka-, vaŋhudā̆*). It is clear that it was a later tendency introduced in a few cases.

18. *ō*

ō occurs:
1. *-ō < -ah*;
2. *-ō < -a*;
3. *-ō* for *-a* in words that were split up;
4. *-ō < -au*; see §20 on *ə̄u, ao, -ō*;
5. in *ōi*, see §19 on *ōi, aē, -ē*;
6. in *-ōyā̆- < -ayā̆*;
7. in a number of forms replacing *ə̄, a* or *ā*;
8. for *ā* before *u* in the following syllable (*jyōtūm*).

Ad 1. (*-ō < -ah*)
*-as > *-ah > -ō.
Nsm of *a*-stems *dvafšō, rəmō*
NAsn of *s*-stems *draonō, manō*;
Gs of cons.-stems: *drūjō*;
Np of cons.-stems: *narō*.

We also find *-ə̄* in this position with the same origin. *-ə̄* is typical of Gathic. There are two possibilities: 1. *-ə̄* was Gathic and *-ō* LAv.; in that

case this -ō does not concern us; 2. there was a distribution, perhaps -ō before a (word beginning with a) labial (and/or after a labial). I suppose that -ah became -ə̄ which later became -ō. (The development to -ō was post-Gathic; see on -ə̄ < *-ah.)

Ad 2. (-ō < -a)
A few forms have -ō instead of original -a. They are frō, apō, (avō). frō is only Gathic; when it forms one word with a verb it is fra- (frā- only in frāvaocā 34.12b, 46.7e, but YH fravaocāmā 35.9), as it is in normal compounds (frā- only in frāxšnana-), with one exception in each case: frōsyāt 46.8b for /fra asyāt/ (> *frāsyāt?) and frōratōiš < *fraʔrti- (see below).

The forms may be given:

frō mā 28.11b	apō mā 32.9b	[avō] bavaitī 30.10a
frō mā 45.6e	apā// 33.4a	avā drujō 30.10a
frō mōi 33.8a	(verse end)	avā yōi 44.13c
frō vā̊ 49.6a		
frō xᵛaētavē 46.5d		
frō spantā 33.13c		
frō ašahyā 46.3b		
frō tāiš 46.10e		
(frōsyāt 46.8b)		

The explanation is probably that *fra-mā developed into *frə̄-mā (with *apə̄-mā cf. apə̄ma- 'last'), and that later *frə̄ was replaced by (or developed regularly into) frō.

frōratōiš is unexplained. Perhaps LAv. frārati- points to an earlier stage *frə̄-ara- (with frō later replacing frə̄), though from *fraʔrti- I would expect *frārati-, cf. rārəša-.

Originally the 'preverbs', when standing immediately before the verb, were as much separate words as when they stood elsewhere. (The form frā-, with lengthening of the final vowel, testifies to that.) As we find fra- when it is written as one word with the verb, it must still have been fra in Gathic (in all positions). The -ō, then, is not Gathic.

Ad 3. (-ō in words that were split up)
daēvō. zušta-
baxšō. hvā
daragō. jyāitīm
dīdraɣžō. duyē /dīdragžadvai/, etc.

When a word was broken up and the first part ended in short -a, this was replaced by -ō. There is no good explanation. As it is a clearly artificial break, the ō is not relevant to Gathic.

Ad 4. see §20.

Ad 5. see §20.

Ad 6. (*ōyă̆* < *ayă̆*)

A number of forms has *ōyă̆*:

akōyā	*ōyā*
hādrōyā	*urudōyatā* /*rudayata*/
isōyā opt /*isaya*/	*vōyaθrā* /*vyaθra*/ or /*vaiθra*/?
jōyā /*jīviyā*/	*xᵛāθrōyā* /*huʔāθrayā*/ ins. sg. (or.
ā.mōyastrā.baranā	/*huʔāθrai ā*/ loc. sg.?)

YH *vātōyōtū* 35.6 beside *vātə̄yāmahī* 35.7

    axtōyōi Ds of *axti-*

    ubōyō loc. du. of *uba-* 'both'

jōyā continues PII **jīviya-*, and the form was still trisyllabic. LAv. *juya-* and (with false vocalization) *jvaya-* probably point to **juviya-*, written *juuiia-*, with later *uu̯i* > *u̯i̯i* > *ui* > *ōi*. As -*iv*- was preserved (*ašivǎ, fraidivā*), there is no reason why Gathic would not have had /*jīviya-*/, and in fact this form has been preserved in *gąm jīvyąm* Y 3.3, 22.1. But the form is also interpreted differently.

isōyā /*is-ay-a*/ is 1sg opt. of a thematic present.

If *xᵛāθrōyā* was a loc. (and *ā* a separate word), -*ōi* was regular.

urudōyatā points to a present /*rudaya-*/.

ōyā may be /*ayā*/, ins. sg. of *ayām*. (/*aivā*/ from *aēva-* 'one' seems not possible, as *ōivā does not become *ōiyā. I think LAv, *ōyum* < *aēvam cannot derive from *ōivəm, as *ōi*- is unexplained here (it stands in an open syllable, as in all other forms of this word). So the *ō*- must be due to a special development in the acc. sg., and this must be *u* < *və* before nasal. Thus *aivəm > *aium, *ayum > *ōyum*.)

The other Gatha-forms are unknown.

YH *vātōyōtū* has *ōy* apparently from *ə̄y*, cf. *vātə̄yāmahī* (see Ad 7. below).

As -*ay*- is normally preserved in Gathic, -*ōy*- in these forms must be of later date. It has been explained as taken over from forms with anteconsonantal *ai* > *ōi*, e.g. 1sg opt -*ōya* after -*ōiš*, -*ōit̰*; *ubōyō* after *ubōibyā*. But this explanation seems not possible for all instances.

Ad 7. (*ō* for *ə̆*, *a*, *ā*)

The forms are the following:

for *ə̆*: *θβōrəštā* (for *ərə*);

    mōrəndat̰ < **mərənda-*

    garōbīš < *garəbīš < *garbīš;

    dužazōbǎ < **-zəbǎ* < **-zbǎ* (Gathic /-*zuʔāh*/);

    θβarōždūm < *θβarəždvəm

    aojōnghvant- < **aojə̄nghvant-*

cazdōnghvant-
YH raocōŋhvant-
YH vātōyōtū < *vātəyōtū;
for a: cōrət < *cart
    frōrətōiš (LAv. frārəti-) < *fraϑt̥ti-
    syōdūm < *syadvam
    θrāyōidyāi < *θrāyadyāi
    YH vərəzyōtū
    YH vātōyōtū;
    YH huxšaθrōtəma-.
for ā: dōrəšt beside dārəšt
    jyōtūm, Gs jyātəuš
    frōsyāt̥ < *fra asyāt
for a or ā: uzəmōhī < *uz-mahi or *uz-mā-hi

ə̄ > ō will have been caused by adjacent labial. In four forms this was a following v. The forms in -ōnghvant- must clearly be explained in this way. We have seen that they had -ahvant- in Gathic (§10); -ānghv- must be a later development or intrusion. On vātōyōtū see Ad 6.

a > ō is quite difficult; there is no general rule. In frōrətōiš the preposition in the form frō will have been introduced, as well as in frōsyāt̥ (and frō here is artificial, see 2 above). θrāyōidyāi is abnormal in that it does not have -yeidyāi. It is probably due to a split, cf. θrāyō.dyāi J2. -dūm is often split off, so that syō- could have the same origin. This is certainly the explanation for huxšaθrōtəma- (a v.l. has -ō.təma-; cf. also YH spəntō.təma-). In the forms -ōtū the u of the following syllable may have caused the ō.

ā > ō is even more difficult. On jyōtūm see Ad 8.

These forms are all irregular: normally ə̄, a, ā are preserved. The ō's did not belong to Zarathustra's language.

Ad 8. (jyōtūm)
Only jyōtūm has ō < ā before u in the following syllable. The counter-evidence is very large: gātūm, pāyūm, āyū, āsū etc. This development is not found after labial (as is the parallel one for short o). Therefore this category should be added to Ad 7 above.

Conclusion
In almost all cases it could be shown that the ō was post-Gathic.

19. ōi, aē, -ē
PII *ai is represented by aē or ōi, final -ē or -ōi. The relation of these forms to each other is not immediately clear.

In final position -$\bar{e}$ is very frequent, but -$\bar{o}i$ is also well represented (some 40 forms).

The comparison $ao : \bar{o}u : \bar{o}$

$a\bar{e} : \bar{o}i : \bar{e}$

suggests that $\bar{o}i$ continues $\bar{o}i$. When we accept this, both elements of $\bar{o}i/\bar{o}i$ are more closed than those of $a\bar{e}$. Compare the figure (Morgenstierne 1947, 47):

```
     i           u
        \  ə  /
      |        |
      e        o
        \  |  /
           a
```
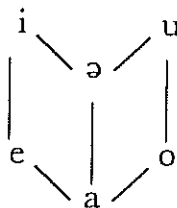
Therefore it seems useful to look whether there is a distinction between open and closed syllables. We find in the Gatha's proper (final -$\bar{o}i$, -$\bar{e}$ not considered):

	$\bar{o}i$	$a\bar{e}$
in closed syll.	23	10
in open syll.	7	48
total	29	58

(Given are different words, not occurrences. Not counted are the genitives in -$\bar{o}i\check{s}$. The numbers are not absolute, as one might count some words together—as I did—or not.)

The numbers are even more striking if one realizes that 7 out of 10 closed syllables with $a\bar{e}$ have -$a\bar{e}iby\bar{o}$. We may conclude that open : closed was the original distribution.

The exceptions are the following

$\bar{o}i$ in open syllable:

$\bar{a}.h\bar{o}i\theta\bar{o}i$ $m\bar{o}i\theta a\underline{t}$

$cik\bar{o}itaras\check{}$ $v\bar{o}iv\bar{\imath}d\bar{e}, -ait\bar{e}$

$c\bar{o}i\check{s}am$ $v\bar{a}ur\bar{o}imaid\bar{\imath}$

$c\bar{o}i\theta a\underline{t}, -ait\bar{e}$

$d\bar{o}i\check{s}\bar{\imath}, d\bar{o}i\check{s}\bar{a}$

All forms but one are verb forms. I suppose that $\bar{o}i$ is due to other forms where $\bar{o}i$ was regular. Cf. $m\bar{o}ist$ beside $m\bar{o}i\theta a\underline{t}$; cf. $c\bar{o}i\check{s}$, $c\bar{o}i\check{s}t$ beside $c\bar{o}i\check{s}am$. Apparently $\bar{o}i$ was generalized. The roots $ci\check{s}$-, cit- and $ci\theta$- have always $\bar{o}i$ in the full grade in Gathic. (We have seen that $cavi\check{s}$- also presupposes *$c\bar{o}i\check{s}$-; 14.8e of this chapter.) As to $v\bar{o}iv\bar{\imath}d\bar{e}$, the form $v\bar{o}i.v\bar{\imath}dait\bar{e}$ was split. For $v\bar{a}ur\bar{o}imaid\bar{\imath}$ too there is some evidence for split. $\bar{a}.h\bar{o}i\theta\bar{o}i$ may be assimilated to final -$\bar{o}i$.

aē in closed syllable have:

aēšəma-

hamaēstārō

raēxənah-

-aēibyō 7 ×

There are six forms with *-ōibyō/ā.* *aē* will be the younger form.

I have no explanation for the other forms. They may be LAv.

In the YH the situation is comparable (partly the same forms as in the Gāthās proper):

	ōi	*aē*
in closed syll.	4	6
in open syll.	1	16

The exceptions are:

ōi in open syllable in *vaocōimā* opt. Cf. on *vāurōimaidī* above.

aē in closed syllable in:

-*aēibyō* twice	*yavaēsvō*
sraēšta-	*yavaējyō*
naēnaēstārō	(*fraēšyāmahī*)

On *-aēibyō* see above (the YH has *-ōibyō/ā* four times).

The forms with *yavaē-* were root nouns with *-su(v)ō, -ji(y)ō.*

Further evidence for open : closed as the determining factor is:

nōiṯ : *naēdā, naēciš*

daēdōišt

vaēdā, vōistā, vaēdā 1, 2 and 3 sg. of *vid-* 'to know'

vaēdō.dūm : *vōizdūm*

-*ōiš* gen. sg. of the *i*-stems, where **-*aēš* is never found;

-*aēšū* loc. pl.: *-ōibyō* dat. pl. Whereas *-aēbyō* is frequent, **-*ōišū* is never found.

(-*ē* and) *-aēcā*, never **-*ōicā*;

the thematic optative.

The thematic optative has the following forms (in brackets forms not relevant):

opt. Act.	-	Med. (*-ayā*)	
	-*ōiš* GL	-*aēša* L	
	-*ōiṯ* GL	-*aētā* GL	
	-*aēmā̆* GL, -*ōimā* YH	-*ōimaidī* G, *ōimaiδē* L	
	-*aēta* L	-*ōiδβəm* L	
	(-*ayən*)	(-*ayanta*)	

All forms agree to the rule except 1 pl. Med., in Gathic as well as in LAv. For GAv. *vaurōimaidī* we saw that it may have been split (where *-ōi* is regular). Another exception is YH *vaocōimā*, also 1 pl. Whatever the explanation of these forms, the system as a whole agrees with the rule and is a strong confirmation of it.

Note that *vaēm* 'we' and *gaēm*, acc. sg. of *gaya-* 'life', still were disyllabic /vayam/ and /gayam/ in Gathic. LAv. seems to prefer *aē*.

Apparently final *-ai* was pronounced as a closed diphthong for we never find *-aē*. *-ē* is frequent, notably in the dat. sg. ending of consonant-stems, and in 3sg and 3pl *-tē*, *-ntē* (the latter never have *-ōi*). But *-ōi* is also well represented, some 40 forms. No distribution has been found. Also we find both endings with the same form: *gərəzōi* : *gərəzē*, *gaṯ.tōi* : *gaṯ.tē*. (The forms in *-ē* are found at the end of the line. Note that the forms in *-ō* < *-ah*, beside such in *-ə̄* (§14.7), were found at the same place.) Here we have a diphthong against a single vowel without a distribution. The conclusion must be that the diphthong is the old form and *-ē* the younger development. Therefore we must posit /-ai/. As it is not probable that *-ōi* developed directly into *-ē*, the diphthong must have had another shape, either *-ə̄i* or *-ai*.

θβōi.ahī 34.11c, which must have been /θvayahi/, shows that this *-ai* became *-ōi* after Zarathustra. Though it does not prove that *-ōi* in other forms must have been *-ai* in Zarathustra's time, it does show that this is possible.

The exceptions must be due to younger forms or accidents. It seems clear that at an early date the distribution was automatic. This will be true of Zarathustra's time, if the whole development was not of later date.

As *ōi* and *aē* were allophones we must posit one diphthong, for which we posit /ai/.

Note that the forms in *-uyē* must have had *-ai*, i.e. *-u(v)ai* (the *y* was a glide before the *-ē*), and the metre shows that *-uyē* was monosyllabic. Thus *vīduyē* was /viduai/.

Appendix aē/ōi in Avestan

A. Non-final syllables

When stems are counted once only (e.g. *aēnahvant-* is neglected because we have *aēnah-*; there are several doubtful cases), we arrive at the following figures for the whole of Avestan, on the basis of the AirWb. (the Gathic material included):

	ōi	*aē*
in closed syllable	29	29
in open syllable	6	162

Of the six forms with -ōi in open syllable three are ōiva-, vīdōiva-, harōiva-/hārōiva-. It appears, however, that these words have -ōyum in the acc. sg. (supposed to be from -ōiva-) and -aēva- in the other forms. It is evident that -ōyum does not derive from **-ōivəm from an ununderstandable stem form -ōiva-, but that the ō(y) is due to -um < -vəm. Thus we must assume *-aivam > *-aivəm > *-aium, *-ayum > -ōyum. These forms, then, do not have ōi < ai in open syllable. raθōišəmnəm 'beim Dahineilen im Wagen' may contain the loc. raθōi. I have no explanation for sōiδiš (Y 58.1) and ā.hōiθōi (Y·32.14a), the latter Gathic, the former old Avestan. So only these two exceptions remain.

About the forms with aē in closed syllable not much can be said. Several of them are derivatives from words with regular aē (daēva- : daēvya-). See also below.

There can be no doubt about the *origin* of the two developments: aē was the variant in open syllable, ōi the variant in closed syllable.

Very striking are the cases with aē : ōi of one root:

(bərəɣmya-)šaēta- : aiβi.xšōiθn- (see also s.v. *aiβi.šaētan-), šōiθra-;
anupaēta- : anupōiθβa-
armaēšad- : armōi<ž>dō. The conjecture has been rejected (because a
    zero grade of -šad- is unknown) and replaced by *armōištō (cf. raθōišti/e).
daēman- : dōiθra-;
xšaēta- : xšōiθnī-
yaētuštəma- : yōiθβā (nom.·sg. perf. ptc. of yat-);
vaēɣa- : vōiɣna-;
zaēša- : zōiždišta-, zōišnu-.

Beside irregular forms with aē the correct forms with ōi are sometimes still found:

raθaēštā- : raθōišti/e; cf. gāθβōištā-;
hamaēstar- : hamōistri;
raēθβa- : rōiθβən.

Irregular beside regular aē have:
gaēiθya- : gaēθa-
daēvya- : daēva-
vaēpya- : vīsō.vaēpa-
maēsma- : gao-maēza-
haēnya- : haēna-
vīdvaēstva- : dvaēšah-
raēxnah- : raēkah-.

However, -ya- may still have been -iya-.

aēm and vaēm (which have not been counted) continue -ayəm. It is possi- ....

ble that the diphthong here dated from a time when *aē* and *ōi* were no longer automatic. This also explains acc. sg. *kavaēm* < *-*ayam*, and forms like 3 pl. *cikaēn* < *-*ayan*.

B. Final syllables

Note the forms with final syllable closed with a consonant: *cōi̯t̯*, *parōi̯t̯*, *bōi̯t̯*, *frōi̯t̯*, *nōi̯t̯*, *mōi̯t̯*, *yaδōi̯t̯*. -*aēC* is never found.

The abl. sg. of *i*-stems has -*ōi̯t̯*; it was formed on the basis of the gen. sg., which has always -*ōiš*.

As to the date of the phenomenon, we have seen that there is reason to suppose that it was post-Gathic. As the distribution *aē* : *ōi* is still rather well preserved, the automatic distribution cannot have been disrupted long before the beginning of the written tradition.

The situation is different with *ao* : *ōu*, where *ōu* is very rare. It is only found in -*ōuš*. Beside the Gathic forms I only found *dōuš.sravah*- and *dōuš.manahya*-. These are derivatives with full grade of *duš*- (Skt. *dorgahá*-). They could have old *ōu*, retained because they looked like the gen. sg. ending (but perhaps *ōu* was introduced by scholars after the word was split up).

20. *ōu*, *ao*, -*ō*

1. *ōu*, *ao*

The distribution of *ōu* and *ao* is quite different from that of *ōi* and *aē*. There are approximately 65 forms with *ao*, *ōu* is found only in the gen. sg. of *u*-stems (and one other form). There are seven of them, beside five in -*aoš*. It has been shown that -*ōu* is the Gathic form (Narten 1969). *ōu*, then, occurs in a gen. ending, just like *ōi* in -*ōiš*, i.e. in a closed syllable. We may assume that originally the distribution was the same as that of *ōi*/*aē*, but for some reason *ōu* was ousted by *ao*. Perhaps the distribution existed only in final syllables. Here again we have one diphthong /*au*/.

The one other form is /*gauša*-/ (L. *gaoša*-) 'ear', which is written *gōuš.a*-, as if it contained the gen. sg. of *gav*- 'cow'. This form is nevertheless important. It was split up, of course, long after Zarathustra. This word should have had *ao*, because it stood in an open syllable. Nevertheless it could be identified with the gen. sg. *gōuš*. This means that at the time when the word for 'ear' was split, it had a diphthong that was identical to that in the gen. of 'cow'. So both must have had /*au*/.

There are about 65 forms with *ao*. 11 of them do not continue an old diphthong; see below. Five are gen. sg. in -*aoš*. Of the remaining 49 some 9 or 13 have *ao* in a closed syllable. The forms with *ao* in open syllable,

then, are almost five times as frequent as those with *ao* in closed syllable. So it is understandable that *ao* was generalized.

-avē is written *-aovē* in *drigaovē, vaŋhaovē, xᵛaēiaovē*. This is a phonetic writing of the pronunciation of bilabial *v* in /*-avai*/.

mraoī probably represents /*mravi*/.

/*av*/ before *r* is sometimes written *ao*: *vaorāzaθā*, < *va-vrāz-, fraorə̄i* /*fravrī*/.

kərənaon was /*krnavan*/, with later development *-avan > -avən > -aun.*

ašaoxšayantā was / *artaʔuxš-/, fərašaoštra- /fraša ʔuštra-/.*

paouruya-, paourvīm represent /*parv-/. (As /paru-/ appears as *pouru-*, there was at that time still a difference between *u* and *v* i.e. /*parv-/* was not yet *paruu-*. See §17.)

aγžaonvamnəm has *o* instead of *u* indicating epenthesis.

2. *-ō < -au*

Only in *parətō* 51.12a, loc. sg. of *parətu-*. However, 51.13b the same form has *parətå* (which might represent *-āu*, see §12). Both may have their ending from the surrounding forms, so both are doubtful.

Another instance is *hvō* 'that'. This word is partly the masculine corresponding to fem. *hā*, for which we would expect **hā > *hə̄, *hō.* But it must also represent **hau*, which is the nominative corresponding with LAv. *hāu*, OP *hauv*. LAv. has a number of forms in *-vō*, which are voc., loc. (< **-au*) and instr. (< **-ū*).

As *-ōi* still was *-ai*, so *-au* was probably still retained unchanged in Gathic.

21. The length of vowels

1. *u, ū*
In the Gāthās proper we find:

text	*u*	*ū*
PII **u*	58	19
PII **ū*	5	18

(The numbers are not exact; there are several doubtful cases.)
The five words with *u* for old **ū* are:

hizubīš
tanuši-cā
hunuš
hunara-, hunarətāt-
ʔurunas-cā, YH *urunō*

For *urvan-* there is no certain etymology. If it was **ruHan-/ruHn-*, we expect long *ū*, not if it was **Hrvan-*. With *hunara-* cf. Skt. *sūnára-*; *hu-* can be analogical.

For *-u-biš*, *-u-ši-* (if this stands for **-ušu-*) cf. *-ibyō/ā* for *-ī-*. The *-u-* could be analogical.

With long *ū* for short we have:

-ūm acc. sg.	*srūidyāi, asrū(ž)dūm, srūtā*
-ūš acc. pl.	*stūt-*
āzūiti-	*sūca-*
būj-əm	*ūcąm (vac-)*
būna-	*?ūitī*
drūjō, -as-cā (:drujəm)	*xšnūt-əm*
dūraoša-	*yūjən (: yuxtā)*
gūša- (: guš-t-)	*yūšmāka-, -vant-*
?gūzra-	YH *aidyūnąm*
urūdōyatā	*āhūiryā*
urūraost	*išūidyāmahī*
urūpayeintī	

An *u* was often lengthened, but precise rules cannot be established.

The acc. pl. *-ūš* continues **-uns*, which will be a regular development. The acc. sg. *-ūm* probably has *u* lengthened before tautosyllabic nasal.

It seems that an *u* with an epenthetic *i* was lengthened: *āzūiti-* (from there in *āzūtōiš?*), *srūidyāi* (from there in the other forms?), *ūitī* (if the *u-* was etymologically short), YH *āhūiryā* (cf. *ahura, ahurānī-*) and *išūidya-* (cf. *išud-əm, -ō*). There are no forms with epenthetic *i* and short *u*. The origin may be that the *u* was *relatively* longer than the epenthetic *i*, and therefore written long to indicate the contrast, but it might as well be that the *u* thus really became identical with the long *ū*.

In the reduplication syllable *u* is long. In this position *i* too was often long.

Further it seems that in a closed syllable the lengthening was sometimes absent: *gūša- : guštā, yūjən : yuxtā*.

Remarkable is *drujəm : drūjō, -as-cā*.

Note that there is no rule for a large number of the forms cited.

2. *i, ī*

The situation is the same as with *u, ū*, only the numbers are larger.

There are eight words with *i* for expected *ī*:

kainibyō	YH *mainimadi-cā* opt.
šyeitibyō	YH *varəzimā-cā*

ʔašibyā YH nāiriną̇m-cā

aši-cā ins. sg.

xᵛīti-cā acc. du f.

For -ibyō/ā see on u, ū.

The YH forms will have shortening caused by -cā. Note that in mainimadi- it concerns the third syllable from the end.

The forms in -i-cā may have graphically shortened -ī. A Gathic lengthened -ī returned to its short form before -cā, which was also done here, but wrongly. (Note that the accent before -cā did not lengthen the -i-.)

Long ī for short is very frequent (the YH adds no new items):

ʔasīštiš 44.9d	təvīšī (: təviš-cā)
īṭ	vīvā̊ngha- (van-)
āvīšya-	ā. vīvarəšō
cīṭ	vīcira-
dīdaiŋhē	vīciθa-
dīdarəšatā	vīd-
dīdarəžō	vīnastī
dǣjīṭ. arəta-	vī. dāiti-
dīdraγža-	vī. dīšəmna-
əvīdvā̊ (: əvisti-)	vīdu-
hīšasaṭ	vīdvaēša-
īšti- (: ištōiš)	vīsa
kəvīna-, kəvītāt-	vīs-
jīgərəz-	vīspa-
fra-mīmaθā	vīštāspa-
mīždavant-, YH mīždəm	vīvaŋhuša-
mīzą̊n?	xᵛīti-ca⟨*huitī-
narəpīš	zəvīštya-
nīš	
rajīš	
sīša- (sāh-)	
sīždya-	

The instr. pl. ending is -bīš (cf. below on īš).

For -īm, -īš, see on u, ū.

Here again the reduplication often has ī, but note mimaγža-, cixšnuša-, dīβžadyāi, didą̇s, (but dīdaiŋhē), hišay- (root hi-).

An i preceded by v is mostly long (the whole right hand column, and əvīdvā̊, kəvī-). Beside those noted above, the exceptions are: āviš, səvišta- ...

and *vista*. Of these *savišta-* has the normal superlative suffix *-išta-*, but in *zavīštya-* this suffix was lengthened. In *tavis-cā* we have the shortening we saw above (*aši-cā*, *xᵘāti-cā*). Therefore we may assume that lengthening after *v* was regular, but that it was changed by editors in the case of *savišta-* and *tavis-cā*. (Another possibility, however, is that *i* after *v* was lengthened only in open syllable. But this also leaves some exceptions.)

Further the great number of *-īš(-)*, *-īž-* is striking, but there are exceptions: beside the superlative *-išta-*, *ādišti-*, *āviš*, *daibiš-*, *hišay-*, *nišạsya-*, *pišya-*, *snaiθiš-* and the nom. sg. in *-iš*. *āviš* is all the more strange as after *v* we expect long *ī*.

There seems to be no short *-iṭ* (thus we have *īṭ*, *cīṭ*, *dąjīṭ.arata-*).

Remarkable is *īšti-* (three cases, 7 forms) against *ištōiš* (3 times).

3. *a, ā*

Here again many times we do not find the historically expected length.

1. *a* for *ā* is found:

abyas-cā	?*ajạn*
ah- aŋhara-cā	[*a*]*nāšē*
aŋhayā	[*a*]*rapā*
aiθīš-cīṭ (: *āiθiš*)	*axštaṭ*
ašavan-	*avaēnatā*
?*caratas-cā*	*dạmanahyā*
?*daθrạm* (Skt. *dā́tram*?)	*haurvatō*
dā- daduyē	*spitamāi*
daidyāi	*uštanạm*
fradaθāi.ā	
i- ayantạm /*ā yantam*/	YH *hišcamaidē*
kayā	YH *vaēdayamahī*
mavaitē	YH *yazamaidē*
mạzā.rayā	
nanā (Skt. *nā́nā*)	
?*saxᵘārạ̄* (: *sāxᵘạnī*)	
tayā	
yavaṭ, yavaṭ.ā	
-anạm	

abyas-cā, *aiθīš-cīṭ* (root *āθ-*), ?*caratas-cā*, *aŋhara-cā* have *a* because of the clitic. *-cā* drew the accent to the preceding syllable, which reduced the penultimate. (It is not certain that the gen. sg. *caratas-* had originally *-āt-*.) It should be noted that many forms with *-cā* retained long *ā* in that position: *gātūm-cā*, *ajyāitīm-cā*, *rāmạm-cā*, *dāθạm-cā*. *aŋhara-cā* 45.7b stands beside *áŋharā*. If *aŋhayā* 32.16c corresponds to Skt *āsayá*, we have the same shortening.

daduyē was /daʔadvai/. It shows that the (contracted) *ā* was shortened after Zarathustra (this was either a linguistic fact or a graphical one).

daidyāi 31.5b, 51.20a must be a root infinitive, i.e. *dā-dyāi*. *dāidyāi* is the better reading in 44.8b, where the verse (3-7) requires an extra syllable (but disyllabic *-ā-* is morphologically impossible). Was *-a-dyāi* refashioned after the present infinitives in *-a-dyāi*? Most probable is that *-a-* is simply an error.

fradaθāi.ā 45.9d, *fradaθāi* 31.16b (which may have been **-āya *spərəzatā*); root *frād-*. See below.

mavaitē (twice), Skt. *māvant-* stands against *θβāvas* (5 ×), *xšmāvatō,* *-vatąm, -vasū, yūšmāvatąm*. It must be a simple error. The words are not found in LAv.

The second element of *mązā.rayā* contains *rāy-* 'wealth'.

saxᵛārā contains the root *sās-*. A form *sas-* is found in the aorist of *səngha-*, but it will belong together with *sāxᵛənī*.

tayā adj. 'secret', Skt. *tāyú-*, LAv. has *tāyu, tāya-*, so it is probably an error.

yavat(.ā) cf. Skt. *yấvat*.

The gen. pl. of *ā*-stems is always written *-anąm*, which is the normal form in LAv. It is not possible to decide whether it is Gathic.

Five forms have *a-* for (the independent adverb) *ā*. (*ajən* is uncertain.) In *[a]nāśē* and *[a]rapā* this **ā* was inserted by the editors, so it is not a fact of Zarathustra's language.

Three 1pl forms in the YH have *-amahī, -amaidē*.

Of four words all forms found may be given:

	spitāmō 2		*haurvatās, vås-* 1, 1
	amā 1		
dəmānəm 1	*āməm* 2	*uštanəm* 2	
dəmanahyā 1	*āmahyā* 1		*vatātō, vatō* 2, 1
dəmānāi 1	*amāi* 1	*ānāi* 1	
		ānā 1	*vātā* 6
dəmānē 7			
	amåŋhō 1 voc.		
		ānāiš 1 YH	

No general rule has been found. For the vocatives *spitamā, -åŋhō* withdrawal of the accent to the first syllable, as in Sanskrit, has been proposed. But for the other forms no such explanation seems possible. If the accent was shifted to the penultimate in forms like the genitive, *dəmanahyā* could be explained, but *spitāmahyā* contradicts it. Therefore such a solution is not probable for /*fradaθāya*/ (see above), nor for *spitamāi* 51.11a (which might have been **spitamāya; -āi* itself was not disyllabic in Gathic).

Even less clear is *uštanəm*. *Haurvatō* may have *-vat-* after the nouns in *-vant-*.

It is remarkable that none of these forms has *əm*, *ən* for *am*, *an* (or *ąm*, *ąn* for *ām*, *ān*). This suggests that they may be mere graphic errors (or later shortenings).

2. Long *ā* for expected short is found:

ah- *å̊ŋhāmā*	nas- *nāšāmā* 2×
hātąm, *hāitīm*	*rānyō.skəraitīm*
anyāθā (Skt. *anyátra*)	*rāməm* : *rəmō*, *-əm*
ci- *šyātā* 3pl	sar- pres. *sāra-*
?*daibitānā*	*srāvahyeitī*
dar- *dādrē*	*urvāθā* : *urvaθō*
dā- *dātā* 3pl	*urvāta-* : *urvatəm*
dā-[3] *dyātąm*	*urvātōiš*
drəgvātā	van- *vāunuš*
dvārəntā	*vīvāpat̰*
ə̄ə̄ānū	var- *vāura-* /*vavra-*/
ə̄ə̄āvā	*vāra-*
frāxšnənəm : *fraxšnī*	?*vāstra-* etc.
?*fryānahyā*	*vərəzyātąm*
haēcat̰.aspānā	*vādāyōit̰*
haiθyāvarəštąm	*vāvərəzōi*
hāmō : *haməm*	?*vourucašānē*
i- *āyat̰*	*xᵛārəmnō*
katārəm 2×	*xᵛāpaiθyāt̰*
kāvayas-	*xᵛə̄nvātā*
man- *mainyātā* 3pl	
mərəždātā 3pl	

å̊ŋhāmā is 1pl sub. < *ahāma. If the lengthening is post-Gathic, it would show that *ā(ŋ)h-* > *å̊(ŋ)h-* was post-Gathic too.

It has been observed that lengthening is frequently found before a long *ā*: *å̊ŋhāmā*, *nāšāmā* (also *nāšē*), *vərəzyātąm*, *dyātąm*, the 3pl forms in *-ātā*, *anyāθā*, ?*daibitānā*, *haēcat̰.aspānā*, *urvāθā* (once : *urvaθō* 6 ×), *xᵛə̄nvātā*. Here may also belong *hātąm* (but also *hāitīm*). This fact suggests that the way in which the text was recited caused these lengthenings.

This phenomenon is also found in some of the following forms:

urvatəm 1	
vātahyā 1	*drəgvatō 4*
	vāitē 7, *-vataē- 1*
vātā 2	*vatā 1*

vātā 2 acc. n.	*vatō 6*
	vatạm
	vō.dəbyō 3 /-vadbyah/
vātāiš	*vō.dəbīš 2 /-vadbiš/*
	vasū

Cf. *urvātōiš*, L. *urvaitišca*, *urvaiti*, *urvaitya*. Skt. *vratá-* shows that *-a-* is original. Here the *-ā-* spread to the genitive. Note that this lengthening is not regular (e.g. *drəgvatạm*), and that elsewhere a long *ā* was shortened before long *ā* (gen. pl. *ā*-stems *-anạm*, *nanā*, *tayā*).

For *katārəm* an analogical proces has been assumed: as long *ā* in the penultimate was shortened when a clitic was added, (L.) *katarəm-cit* produced an irregular *katārəm*. This explanation cannot be applied to *kāvayas-*. Perhaps the first vowel of a sequence of three shorts was lengthened, cf. *frāxšnənəm*, *srāvahyeitī*.

āyat /ayat/ 31.20a will be due to *āyat /ā ayat/* 46.6a.

dvāra-, *sāra-*, *x^{v}āra-* must have had originally short *a*, as roots in *-V̄r* are impossible in PIE.

vāura- /vavra-/ 'to turn', a thematic aorist, has short reduplication (**vavra- > *vaora-*), unless the root had initial laryngeal, what cannot be ascertained. *ao* and *āu* interchange more often in the manuscripts.

With *x^{v}āpaiθyāt* compare *θβā-*, *āhmā-*, *xšmā- (yā-šyaoθana-)*.

hāmō, *haməm*. If one considers all forms in Gav. and LAv. (of both words 'same' and 'somebody'), compounds included, it appears that *hām-* (also *hạm-*) is found before *-ō* (once before *-e*), *ham-* before short vowel (incl. *-e*) and also before *-ō*. This shows that there was a tendency to lengthen *a* before a long vowel.

4. *ə*, *ə̄*

As to the length of *ə*, clear tendencies can be seen. As *ə* was not a phoneme, this is a matter of phonetics, but it may be treated here. As this regards phonetics, it will be the phonetics of the pronunciation at the time when the texts were written down; it is not probable that phonetic details of Gathic were retained. It is of interest because it may show tendencies prevalent at that time, which might have influenced our text.

1) The svarabhakti *ə* is short: *rəC*, *CəC*, *ərə* = [r̩].
As to *ərə*, if this were a full vowel phoneme + *r* + svarabhakti *ə*, the first *ə* would rather have been written long (in open syllable; see below).

Cə̄C is found in *də̄bāvayat*, *də̄jāmāspa-*, *də̄jīt.arəta-* and *uzə̄mōhī* (against *dəbaomā*, *dəbənaotā*, *dəbạz-*); it seems dependent on following long vowel.

2) before *m, n*:

a. *əmn* 9 × (for *hacā̆mnā* 44.10c there are different readings; cf. *hacimnō* 43.10b.12d).

b. *ənt* 19 × (*ā̃nt* 4 × : *hā̃ntū, huzā̃ntuš, vīsā̃ntā* (but *vīsəntē*), *xšā̃ntā(m)*).

c. *ā̃mV* 5 × : *əmV* 5 ×
   ā̃nV 14 × : *ənV* 3 ×

d. word final mostly *-əm*, which mostly stands before a consonant. (Note that *i, u* before *-m* were lengthened.) At the end of the verse *-əm* (47 × ; two exceptions).

e. monosyllables have *ā̃*.

There is a clear tendency for short *ə* in closed syllable (a, b, d), *ā̃* in open syllable. (Note *spənta-* : *spā̃ništa-*.)

3) always *əvi*.

4) *-ā̃uš*

5) *ā̃, āh* from *ah*.

6) *-əngh-, -ā̃ng*.

The length of 5 and 6 is not easily understandable. With *ā̃u* cf. *ōi*.

5. *e, ē*

e in *ye < ya* replaces a short vowel;
ē occurs in *aē*, and in *-ē < -ai*.

6. *o, ō*

o occurs in *ao*, and replaces (short) *a* before a syllable with *u*; *ō* occurs in *ōi*; in *-ō < -au*; *-ō < -ah*.

7. Conclusion

   With *a : ā* there are many deviations from the historical length inherited from PII, but this is due to the fact that *a* and *ā* are extremely frequent. In the case of *a : ā* the historical length is better preserved as in the case of *i : ī* and *u : ū*. (A sample showed 3 deviations against 40 cases of agreement for *a : ā*; cf. the numbers for *u* above.)

   We have seen that in most cases the length of the vowels in the text agrees with the historical length. On the other hand the number of deviations is large, and no rules have been found for these deviations, at best a few tendencies can be recognized.

   One possibility is that the historical length has nothing to do with the attested length and that the agreement is accidental. This is not probable, as the number of agreements is far too large for this conclusion. The idea that a vowel in a closed syllable was written short, that in an open syllable

long, is not supported by the facts. The question then is how the deviations are to be explained.

First, there will be a number of errors. In the course of a thousand years of oral tradition errors must have crept in, and the length of vowels was probably much more liable to errors than other points of the sound system. This would be all the more understandable if length was not phonemic (with all or some vowels) in the language of the people who handed down the text. The question is whether error is a sufficient explanation. Though it is not impossible that error is the only factor, it rather looks as if there were other factors too.

One possibility then is that the peciularities of the recitation were responsible for a number of deviations. We know from the fact that final vowels were written (and spoken) long that the recitation had its influence on our text. (The *ə̄*- before words with *ā*- is probably another instance.) Thus we saw that an *a* is often lengthened before a long *ā* in the following syllable. This influence, like the effects of error, is non-linguistic, which explains why we cannot find linguistic rules.

Finally it is possible that later developments (real changes in length) were introduced in the text, but incidentally, so that we cannot establish what these rules were. Here belongs the rule that the penultimate was shortened when a clitic was added, the only instance of a linguistic rule.

For some deviant forms it can be proven that they are post-Gathic: *daduyē*, which was /*daʔaduvai*/; [*a*]*rapā*, where *a*- is a learned addition representing what was *ā* in Gathic.

It is not probable that (some of) the deviations are due to real linguistic phenomena of Gathic, because then we should be able to detect the rules. Therefore, I suppose that in Zarathustra's language the length of the vowels was (perhaps with an incidental exception) that of PII.

That length was phonemic is shown by -*iš*, -*uš* nom. sg. against -*īš*, -*ūš* acc. pl.

8. The length of final vowels.

In Gathic texts all final vowels are written long. This is due to the recitation, not to a linguistic development. E.g. *ašā yecā* < **ašāya-ca* shows that, when *ya* became *ye* (after Zarathustra), the final -*a* was still short. Before clitics we find sometimes a short vowel in forms that originally had short vowel, *pairicā*, *manahicā*, *hənticā*, *nafšucā* (*i* and *u* are always short before clitic); but also when the vowel was etymologically long: *kavā* with -*ā* < **-āi* : *kavacā*, *savā* nom. sg. *ā*-stem : *savacā*, *ašicā* (instr.). Mostly the long vowel is found, be it an etymologically long vowel (*tavācā*, *xšaθrācā*) or a short one (*maibyācā*, *asaxyācā*). The long vowel before -*cā* may be due to (graphic) analogy. The short vowel probably,

shows that at some time all long final vowels were shortened. Whether this was Gathic or of later date cannot be established with certainty, but the very frequent long vowels (before -*cā*) suggest that it was not Gathic.

22. The glottal stop, ?.

One phoneme is not expressed in writing. Very often we find hiatus in Gathic, between all kinds of vowels and in many morphological categories. This hiatus can be described most simply by assuming a phoneme like a glottal stop.

Mostly this hiatus is found where PIE had a laryngeal. The conclusion is obviously that the PIE laryngeals lived on as a phoneme in Gathic. The strongest argument for a separate phoneme is that we find the hiatus also in places where it did not occur in PIE (e.g. in the thematic subjunctive), which proves that there was a secondary extension of a phoneme, as secondary extension of hiatus is very improbable.

It is improbable that we have only a number of archaisms with preserved hiatus, as we find in Vedic, for the phenomenon is quite regular. There are a few difficulties, but these concern mostly the -historical development, not the regularity. It is possible that the language is not the language spoken at the time when the Gāthās were composed, i.e. that the language as a whole is an archaism, the language of priests, but that is irrelevant as long as the language is regular. It is irrelevant whether it is the language Zarathustra himself used in daily conversation, or the language of a preceding generation, provided it is a natural language without elements from different times (and places), and without artificial forms. As far as we can see, the language is consistent, a unity. And this language evidently had a phoneme that continued the PIE laryngeals.

The three laryngeals of PIE had fallen together in PII. There is no trace wherever in IIr. of a distinction between different laryngeals. It is most probable that the laryngeals had merged into a glottal stop, which was still present in the language of the Gāthās. I shall indicate this glottal stop with the phonetic sign ?.

The phoneme did not occur between consonants. In this position it had either disappeared or developed into *i*. In some cases it disappeared in Iranian whereas it developed into *i* in Indo-Aryan.

For the details I refer to the section on the historical development (IV 5).

On the possibility that the glottal stop had disappeared when Y 53 was composed, see ch. I in fine.

NB Word-initial ? is not written; cf. IV 51.2.

23. *Epenthesis and prothesis*

The anticipation of *i, y, ē* and *u* by an *i* resp. *u* sound after the vowel of the preceding syllable is called epenthesis.

i-epenthesis is found before *r, n*, dental and labial stops, *nt* and *ŋh*, when followed by *i, ī, y* or *ē*. It is regular before *r* only. As it is a phonetic phenomenon, not a phonemic one, this means that the influence through *r* was strongest, in the other cases weaker so that it was not always written.

Note *-ainī* but *-ǝnī*

-aintī but *-ǝntī*

After long *ā* it is rare: *-āni, -ē, -ǎntī, -ē.*

On the other hand *i* is written after the prop vowel *ǝ* : *mǝrǝngǝidyāi* /*-gdyāi*/, *āskǝitīm* /*āsktim*/. Sometimes the *ǝ* is itself coloured to *i*: *mazibīš, yezivī.*

On *ānǝitī, hušǝitiš* see 14.8n.

As *-ē* is post-Gathic, in this case the phenomenon must be post-Gathic. The whole phenomenon may be so. As it is automatic, it is non-phonemic.

u-epenthesis. ru and *rv* are always written *uru, urv*. Gathic has only: *aēuruš, auruna-, pourūš* (acc. pl.), *aurvant-, haurvatāt-, paurvatāt-, taurvayāmā.*

On *ušǝurū* see 14.8n.

Prothesis Initial *ri-* is written *iri-, ru-* and *rv-* as *uru-, urv-*. The only Gathic forms are: *irixta-, urūdōya-, urūraost, urūpaya-.*

The *i-, u-* must be disregarded for the metre.

24. *The phonemic system of Gathic*

We have seen that a number of sounds indicated by the Avestan alphabet are largely allophonic. In some cases it could be shown that the sound functioned only as an allophone, in other cases this could be made probable, whereas for yet other sounds this could not be shown by direct evidence but was assumed on general grounds.

We have seen that in a few cases a form with a 'disturbed' history showed a more archaic state than that of the text as a whole. Such words are *θβōi.ahī, θrāyōidyāi, jīvyąm, zānatā*. The importance of these forms can hardly be overestimated. They show that, when a form was not treated in the normal way, Gathic represented an older phase than LAv. The Gāthās were modernized in the course of time. It should be emphasized again that our conclusions are valid only for Gathic. For LAv. a careful study of the material in its historical development is necessary to establish the successive stages of this language.

On other than linguistic grounds the date of Zarathustra is now mostly put to the eighth century at least, that is at least four hundred years

before the oldest LAv. texts and three centuries before the Old Persian texts.

Given this time difference, and the fact that the Gāthās were strongly modernized, and given the difficulty to find clues to the original state of affairs, we are in some places entitled to take a step in the reconstruction that cannot directly be demonstrated by facts. This must, of course, be a step back in time.

Attention should be given to the system as a whole. Notably in the vowel system it should be acknowledged that several changes had not yet occurred in Gathic, which makes it probable that other changes of the same kind are not Gathic either.

The phonemic system we arrive at is the following:

p	b	f			m	v	u	ū
t	d	θ			n			
		s	z		r			
c	j	š	ž			y	i	ī
k	g	x						
ʔ		h					a	ā

For the consonants this system is very close to Morgenstierne's. Only ŋ and ṣ were not Gathic phonemes in my opinion. Morgenstierne thinks that *paŋtaŋhum* and *hazaŋra-* were already Gathic and prove that ŋ was a phoneme. For the first one might doubt that, and the second word can be interpreted as /hazahra-/.

As to the vowels, Morgenstierne accepts ä, ə, e, o (length being irrelevant for ə, e, o), which were clearly not phonemes. For ō and ā this depends largely on the presence or absence of final -h. Here I think we may take one step further than our direct evidence goes. The evidence for ə are the forms where it continues i and u. We have seen that these forms are extremely doubtful. For e final -ē was decisive, but Gathic still had a diphtongue, /-ai/.

Essential is, of course, that all phenomena can be accounted for descriptively by the above system.

25. *Other deviations from the text*

Beside the phenomena discussed above there are other points where the text of the manuscripts deviates from the original text. They can be subdivided into 1) later developments; 2) editorial, i.e. deliberate, changes; end 3) errors and unexplained changes.

25.1 Later developments

yə > *ī:* *ainīm* for older *anyām* (which is also found in our manuscripts). With preceding *i* we have the same result:

īyə > *ī*: *masīm* for *masiyəm; *daibitīm* for **-tīyəm*. This development is normal in Late Avestan.

ayə > *aē*. With preceding *a* a diphthong results: *vaēm* for *vayəm, /*vayam*/.

(*u*)*və* > *ū* is parallel to the preceding. *fsəratūm* for **-tuvəm*, /*-tuʔam*/. In the 2 pl. middle ending *-dūm* for **-dvəm* we have this development, but it is a later introduction of *ū* for *və*, because *-dvəm* in real language became LAv. *-δβəm* (the *d* became a fricative, and through it also the *v*; and *βə* did not become *ū*); so *-dūm* is a form that never existed in real language.

avə > *ao*: *kərənaon* for *kərənavən, /*krnavan*/.

cə, *jə* > *ci*, *ji*: *jimən* (3 pl. sub. aor. of *gam-*) beside *jāmyāṯ* (opt.) and *jamyāṯ*; *hacimnō* beside *hacəmnā*.

hya > *hē* in *Zaraθuštrahē* in Y 53 (1a.3b). It is the LAv. ending. In the YH we find *vahehīš* for *vahyahīš (see VI 28).

šy > *šy* > *š*: *šavaite* for /*šyava-*/.

-āaṯcā for /*-āt-ca*/ is probably due to the accent. In the Gathas it is found only in *ašāaṯcā* 28.10a, 32.4c and *virāaṯcā* 31.15c. So it is a later intrusion.

aov is sometimes found for *av*: *drigaove*, /*drigavai*/. For *avərə* we find *aorə*: *fraorəṯ*, /*fravrt*/.

īv appears as *uv*: *jva* (*juua*, to be read /*juva-*/) for older *jīva-*. The development is known from later East Iranian languages. As there are traces of *īv* in the Avesta, the form was (partly) introduced during the tradition.

25.2 Editorial changes

Often an adverb is repeated before the verb; the metre confirms that it is a later addition. E.g. 31.13c *aibī ašā* [*aibī*] *vaēnahī vīspā* "Thou dost look upon all things with truth." It constitutes the second half of a line which has normally 7-8/9 syllables. With the second *aibī* it would have 11 syllables.

Glosses have sometimes been inserted into the text. Thus in 28.10c *aṯ vā xšmaibyā asūnā vaēdā xᵛaraiθyā vaintyā sravā* the word *xšmaibyā* is probably a gloss of *vā*. (There remains a 7-9 line if we read /*huʔarθi(ʔ)ā vanti(ʔ)ā*/.)

Very often words are split, e.g. compounds: *aibī.dərašta-*, *vīspā.mazištąm* /*vispamazištam*/. (The point, which separates words in the manuscript, is used to indicate that the text reads two words which were in fact one word.) Sometimes the word is wrongly split, e.g. *rānyō.skərəitīm*, which is /*ranyas-krti-*/. Other forms are also analysed, e.g. *gušō.dūm* /*gušadvam*/ with the ending indicated. Here too strange things have happened, e.g. *drəgvō.dəbīš* /*drugvadbiš*/ with instr. pl. ending *-biš*. A consonant may be written double: *gaṯ.tōi*, *gaṯ.tē*, both for /*gatai*/. On *-ō* for final *-a* see, 18.3.

GDsf.   *ax́yāi*   Gsm. *ahyā*
      max́yă   *mahyā*
      θβax́yā   *θβahyā*
      xᵛax́yă   *xᵛax́yāi*

                                       Isf   *vahehyā* YH
comp. ntr. pl. *vax́yă*   Nsm. *vahyō*
      dax́yūm, -āuš, -unąm
      zax́yā-cā /*zahiϸā-ca*/

                                       hyaṯ, hyaṯcā, hyaṯcīṯ

First it should be observed that *zax́yā-cā* 53.8b was /*zahiϸā-ca*/, so here *x́* is post-Gathic. This suggests (but does not prove) that *x́* was post-Gathic in general.

Gen. sg. *-ax́yā-cā* against *-ahyā* without *-cā* is regular (*ax́yā-cā, ašax́yā-cā, arədrax́yā-cā, uxδax́yā-cā, spəntax́yā-cā*). This must be significant. The word accent was moved to the syllable before *-cā*.

The optatives will have had *-yā́-* (Skt. *brūyā́t*).

The nominal derivative presents had *-yá-*, cf. Skt. *namasyáti*. Why *srāvahya-* has no *x́* is not clear. It could be simply carelessness. It is dangerous to use it as evidence for old *hy*.

Of the pronominal forms *ax́yāi* agrees with Skt. *asyái*, but for the other forms Sanskrit has *tásyās, tásyai* etc. Perhaps Gathic has the old accentuation.

Comparative *vax́yă* against *vahyō* is unexplained. (Perhaps the notation *-ax́yă* was due to the pronominal forms in *-ax́yă*.)

For *dax́yūm* Skt. *dásyu-*, a demon, points to the wrong accent. However, the Sanskrit accent may be an innovation (designation of a person), and the word was originally hysterodynamic (LAv. *daŋhaom, daiŋhāvō*, OP *dasyāuš*) and probably had a shifting accent, so Gathic could have generalized suffix accent.

hyaṯ has an unetymological *h-*, which is not explained (did it indicate a voiceless *y-*?), so the form is not relevant here.

We may assume that the accent rule is correct. If so, it was most probably still without exception in Gathic (if it was not post-Gathic), which means that *x́y* is an allophone of *hy* before the accent.

2. *ş, hrk, hrp*

It has been recognized long ago that, when an accented syllable contained an *r* followed by *t, k, p*, the *r* became voiceless. This is written *hr*, voiceless *r + t* developing into a kind of *š*, transcribed *ş* (= *š̌*).

As the Gathic material is very limited, the LAv. evidence is also considered. The material has never been systematically presented. This is

THE ACCENT

The Avestan accent is not directly indicated in our texts. But there are four phenomena that must be ascribed to the influence of the accent.

One is the appearance of *x́* instead of *h*. This has been found to occur when the vowel after *h/x́* is accented. It appeared that the accent concerned was found, on the whole, on the same syllable as in Sanskrit. Only when *-ca* was added to a word the accent was drawn to the syllable preceding *-ca*. As to the nature of the accent, the character of the change *h > x́* shows that it must have been a dynamic accent.

The other indication is the appearance of *hrk*, *hrp* and *ṣ* (= *š́*) for *rk*, *rp* and *rt* resp. when the syllable to which the *r* belonged was accented. Again it appears that, on the whole, the same syllable was accented as in Vedic Sanskrit. Here again, there is, very limited but reliable, evidence that this accent was drawn to the last syllable when *-ca* was added. Also the nature of the change (*r* becomes voiceless) points to a dynamic accent. This shows that we have probably to do with the same accent as that responsable for the development *h > x́*. That is, the two facts belong to one synchronic system. Another problem is what the absolute date of these phenomena was. This question is taken up at the end.

On *-āaṭcā* see II 25.1.

On *hv > x^v* see II 4.

Cf. also II 21.3 on *ā/a*.

1. *x́*

This sign was formerly transcribed *ḥ*. However, the sign is a variant of *x^v*, so *x́* is a better transcription (if the interpretation *x^v* is correct). It occurs only before *y*. It seems that it is due to a following stress.

x́ and *hy* are found in Gathic in the following forms:

	x́y		*hy*	
Gs.	*-ax́yā-cā*		Gs	*-ahyā*
Ds.	*manax́yāi-cā* YH			
opt.	*x́yə̄m*, *x́yāṭ* etc.			
opt.	*sax́yāṭ*			
pres.	*yasō.x́ya-*		pres.	*srāvahya-*
	nəmax́ya- YH			

GDsf.   *axyái*   Gsm. *ahyā*
    maxyå   *mahyā*
    θβaxyå   *θβahyā*
    xᵛaxyå   *xᵛaxyái*

                                            Isf   *vahehyā* YH
comp. ntr. pl. *vaxyå*   Nsm. *vahyō*
    daxyūm, -åuš, -unạm
    zaxyā-cā /zahiꜣā-ca/

                          hyat, hyatcā, hyatcīt

First it should be observed that *zaxyā-cā* 53.8b was /*zahiꜣā-ca*/, so here *x́* is post-Gathic. This suggests (but does not prove) that *x́* was post-Gathic in general.

Gen. sg. *-axyā-cā* against *-ahyā* without *-cā* is regular (*axyā-cā, ašaxyā-cā, arədraxyā-cā, uxδaxyā-cā, spəntaxyā-cā*). This must be significant. The word accent was moved to the syllable before *-cā*.

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Comparative *vaxyå* against *vahyō* is unexplained. (Perhaps the notation *-axyå* was due to the pronominal forms in *-axyå*.)

For *daxyūm* Skt. *dásyu-*, a demon, points to the wrong accent. However, the Sanskrit accent may be an innovation (designation of a person), and the word was originally hysterodynamic (LAv. *daŋhaom, daiŋhāvō*, OP *dasyāuš*) and probably had a shifting accent, so Gathic could have generalized suffix accent.

hyat has an unetymological *h-*, which is not explained (did it indicate a voiceless *y-*?), so the form is not relevant here.

We may assume that the accent rule is correct. If so, it was most probably still without exception in Gathic (if it was not post-Gathic), which means that *x́y* is an allophone of *hy* before the accent.

2. ṣ, hrk, hrp

It has been recognized long ago that, when an accented syllable contained an *r* followed by *t, k, p*, the *r* became voiceless. This is written *hr*, voiceless *r + t* developing into a kind of *š*, transcribed *ṣ* (= *ṣ̌*).

As the Gathic material is very limited, the LAv. evidence is also considered. The material has never been systematically presented. This is

done here. Of course it is necessary to contrast the forms with these developments with those where the *r* remained unchanged. It appears that the old accentuation as found in Vedic Sanskrit accounts for almost all developments.

The material is presented as follows.

Simplicia

-*ta*-	-*tā*-	root nouns •
-*ti*-	-*tāt*-	-*a*-
-*tu*-	-*tar*-	other

Compounds

Determinatives in vb. noun/adj.   general

with -*t*-, -*ta*-, *ti*-, -*tar*-

in subst.

Bahuvrihi's

Governing compounds

2.1 *Survey*

The forms with *ṣ*, *hrk* or *hrp* in Avestan are (G = Gathic, H = YH)

	simplicia	compounds	
-*ta*-	G *aṣa*-		G *pəṣō. tanū*-
	aṣa-		*pəṣō. sāra̤*-
	G *aṣavan*-		*pəṣō. cingha*-
	kəṣa-		*pəṣō. parna*-
	məṣa-	H *aməṣa*-	
	θβāṣa-		
	θβāṣa-		
	xᵛāṣa-		
-*ti*-	G *aṣi*-	H *fravaṣi*-	
-*tu*-	*pəṣu*-		
-*tāt*-	*kahrkatāt*-		
-*tar*-	*bāṣar*-		
	xᵛāṣar-		
root	G *kəhrp*-		*stəhr-paēsah*-
-*a*-	*kahrka*-	*vouru. kaṣa*-	
	mahrka-	*nasu. kaṣa*-	
	vāṣa-	*iristō. kaṣa*-	
	vəhrka-	*baišaza-kəṣa*-	
other	*pəṣanā*-		
	G *maṣya*-		

2.2. *Simplicia*

The simplicia will be discussed according to their formation (see above). Within each group they are arranged according to the Latin alphabet. The meaning given is normally that of the AirWb.

22a. *Nouns in -ta-*

aṣa- 'the Cosmic Order, Arta'. The word differs from Skt. *r̥tá-* both in accent and vocalism. Compounds present forms with *-rt-*: *an-arəta-*, /*djitarta-*/, *aratō.karəθna-*, *Astvaṯ.-* and *Uxšyaṯ.arəta-* (see also on the compounds). A first problem concerns the last two forms, which are names. It has been assumed that **astvatrta-* was coined from Y 43.16 *astvaṯ aṣəm* (and *uxšyaṯ-* after *astvaṯ-*), but this explains neither *-rt-* nor the zero grade. As names they must be put aside. It has been supposed that they are West Iranian. In any case they may be taken as evidence for Iranian **rta-*. The OP words with *arta-* represent /*rta-*/ as appears from Elam. *ir-ta-* (not *ar-ta-*). It has been supposed that the *o*-stem presented an old PIE ablaut, but this is quite improbable. Also it is most improbable that for this central Indo-Iranian concept there would have been two different forms, **árta-* beside **rtá-*. We must start, then, from IIr. and PIr. **rtá-*. There are no other forms where *r̥-* became *ar-* in Avestan (one could only compare *-ərəš-* > LAv. *-arš-*). As there are no instances of **əṣ-*, one might suppose that **əṣ-* became *aṣ-*, but this is contradicted by the compouns with /*arta-*/ (unless the *-a-* was introduced from *aṣa-*). The evidence of /*arta-*/ suggests that **rta-* became /*arta-*/, and that then the accent was drawn to the first syllable, but both developments are unexplained.

aṣa- 'ground' The full grade may have been generalized, but Gr. points to a disyllabic root, which explains *ar-* < **h₂lh₁-*. This must have got the accent. Cf. on the first *aṣa-*.

aṣā̆van- 'truthful', Skt. *r̥távan-*. The form does not agree with the Sanskrit accent. The word will have been reshaped after *aṣa-*. (Also Avestan has mostly short *-a-*; OP has (*a*)*rtāvan-*.)

darəta- m. 'Schmerz' N 15. From *dar-* 'to split'.

dərəta-, *dərətəm* from *dar-* 'to hold'.

karəta- 'Kleidungstück (?)' N 87 only. Perhaps identical with the following, *karətāsca* having the accent shifted. (-*arə-* and -*ərə-* interchange often; cf. on *kaṣa-* below.)

kaṣa- probably 'coat', only Yt 17.14 (corrupt Yt 12.8), cited F 5 as *kaṣa-*. Cf. *kərəti-*; Bailey, Zor. Problems 8 n. 2.

marəta- 'man', Skt. *márta-*. It may have changed its accent after **mrtá-* (but see the next) and/or *marətan-*.

maṣa- 'gestorben' V 5.61. We expect **mṛtá-*. Was it taken from *amaṣa-?*

patarata- 'fliegend', 'winged'. Hardly any Sanskrit evidence.

sarata- 'kalt'. Lith. *šáltas*. Russ. *xólod.* These words have final accent. **k'olHtó-*, Av. can also be **k'lHtó-*.

θβaṣa- 'eilig, rasch'. Cf. Skt. *tvárate, tūrtá-*. The form can have old full or zero grade as it was a disyllabic root; in the latter case it is identical with Sanskrit *tūrtá-*, but the accent does not agree.

θβāṣa- 'firmament', orig. 'the one who hurries', cf. Skt. *tvar-*.

varata- 'gefangen'.

xᵛāṣa- n. 'Essen'.

zarata- 'altersschwach'. Disyllabic root, Skt. *jī́ryati*. (See the conclusions at the end.)

22b. *Nouns in -ti-*

In Sanskrit these nouns are mostly oxytone in the Rigveda, a few barytone (AiGr II 2 §468). The Avestan forms agree with this.

aṣi- f. 'lot, reward'. No Sanskrit equivalent. See on the next.

?arati- idem, is doubtful; only P 39, ms. *ā raitīmca*. The accent was drawn to the syllable before *-ca*.

(**arati-* f. 'Energie' has only forms with *-θ-*.)

jarati- '?'

karati- Kleidungsstück.

marati- 'Sterben'. Skt. *mṛti-* is late.

θanvarati- 'Bogen'.

xᵛarati- f. 'Essen'.

22c. *Nouns in -tu-*

paratu-/paṣu- 'Durchgang, Brücke', mostly Bridge of the Cinvat. We have the following forms:

		GAv.	LAv.		LAv.
	paratuš	1	1		
	-tūm	1	4	*paṣŭm*	3
Ls	*-tō*	1			
	-tā̊	1			
Ap	*-tūš*		2	*paṣavō*	1 (Np as Ap)
	-θβō		2		

(*-θβō* grammatisch mangelhaft; the form is not relevant here.)

Compounds *cinvat.paratu-* 6 times

paṣu.pā V 13.9 (see on det. comp.)

The original mobile accent (OIc. *fjǫrðr* < **pértus*, OHG *furt* < **prtú-*) can hardly be the origin of the two different forms: of the attested forms only

pəsauō should have had *parət-*. It is possible that the accentual mobility caused hesitation between the two forms, but it is improbable that the two accentuations existed for a long time in the language. A possibility is that Gathic generalized suffix accent, but LAv. root accent. The most obvious conclusions seems that *parətu-* is the old form, *pəsu-* the younger one. It is possible that in a later phase the accent was withdrawn, but this is not probable: one must then assume not only the withdrawal of the accent, but also that at that time the development *rt > ṣ* was just in progress. It is easier to make only the latter assumption: the development occurred sometime in LAv. (or between Gathic and LAv.). In this case Gath. *parətu-* was not replaced by *pəsu-*, just like /*djitarta-*/ was not replaced (in the text of the Gatha's) by *-aṣa-*. LAv. *parətu-* can be Gathic influence.

22d. *Nouns in -tā-*

   carətā- 'Rennbahn'
Sanskrit has the accent on the syllable before *-tā-*, but cf. Gr. ἀρετή, γενετή.

22e. *Nouns in -tāt-*

   In Sanskrit accented on the preceding *-a-*.
   kahrkatāt- Name des Hahns. Contains fixed *kahrka-*.
   /*karpatāt-*/ 'karpan-hood'.

22f. *Nouns in -tar-*

   bāṣar- 'Reiter'
   harətar- 'der wacht über'
   xᵛāṣar- 'Trinker'.
   In Sanskrit both root and suffix can be accented.

22g. *Root nouns*

   kəhrp- 'form, body'
The accent on the root has been generalized from the nom. acc. sg. and nom. pl.
   *məhrk- has only *marəxš*; Kellens 1974, 60.
   parət- 'Streit'. Only *parətasca*, where the accent was drawn to the syllable before *-ca*. But stem final *-ṣ* was not tolerated; see the conclusion.

22h. *Nouns in -a-*

   kahrka- Ruf des Hahns; onomatopoea.
   mahrka- m. 'death', Skt. *marká-*. Note Gath. *marakaēca* /*markaí-ca*/. There are some derivatives, which retain *mahrka-*.

haraka- m. 'Abfall'.

varaka- m. 'Blatt'.

varata- m. 'Ball, Klos'. Cf. *zam.varata-*

vāsa- m. 'Wagen'. Cf. *varatō.raθa-* (bahuvr.)

vahrka- 'Wolf', Skt. *vŕka-*. Derivatives retain *vahrka-*.

22i. *Other formations*

kahrpuna- Name eines daevischen Tiers.

karapan- /karpan-/. This word has *-an-*, not *-ān-* (< *-on-*), in the oblique cases, and these words had suffix accent.

maratan- 'mortal'. This words has *-ān-*. These words had mobile accent.

masya- 'man', Skt. *mártya-*.

narapiš- 'decline'. The neuters in *-iš* have suffix accent in Sanskrit.

pasanā- 'Kampf', Skt. *pŕtanā-*.

carakaraθra- 'hymn of commemoration'. Sanskrit words in *-tra-* indicating instruments are barytona (II 2 §517a; differently on *carakaraθra-* ib. p. 704 Petit), but it cannot be decided whether it would be in this case on the root or on the reduplication.

23. *Compounds*

The compounds will be grouped according to the categories in the AiGr II 1 (to which I refer here simply with II 1), see above. Within each category they will be given in the order of the Latin alphabet of the element that shows the (original) group *rC*, e.g. *dājīt.arata-* under the *a-* of *arata-*.

The meaning given is that of the AirWb. When it is given in French, without reference, it is taken from Duchesne Guillemin (= DG).

The main rules of Sanskrit accentuation are given first. Forms that agree with these rules are not further commented upon.

23a. *Determinatives in a verbal noun or adjective*

Four categories will be discussed separately, the forms in *-t-*, *-ta-*, *-ti-* and *-tar-*; the others will be given first.

In Sanskrit normally the second member is accented, mostly on the suffix (II 1 §90b), but those with *su-*, *dus-* are paroxytona. Compounds with *a(n)-* accent the first member (§91a).

caratu-tāra- 'über die Länge eines c. hinausgehend'.

nasu-kaṣa- 'qui découpe les cadavres' (Kellens 1974, 309), and

iristō.kaṣa- idem. Perhaps these compounds were paroxytona, but it is also possible that a noun *kaṣa- was taken over unchanged. See the following.

karatō.baēšaza- 'qui guérit avec le couteau',

karatō.daṣu- 'qui blesse ,,'

garaδō.karat- 'qui coupe la vésicule',

nasu(m).karat- 'qui découpe les cadavres',

zaraδō.karat- 'qui coupe le coeur' Kellens 1974, 308ff. One expects *-kaṣ-*, but cf. the section on *-t-*.

aipi.karata- 'qui met en pièces' Kellens 1974, 311; accent on the preverb, cf. II 1 p. 220; or a late thematization of *-krt-*.

hakarat 'einmal' (*-gan-* 'auf - tötend'), Skt. *sakŕt*. If the accent was on the second member, see the section on *-t-*.

baešaza.kaṣa- 'cueilleur de remèdes', Kellens 1974, 309, probably contains *-krt-a-* which seems to have had the accent on the root; cf. *-kaṣa-* above.

amaratatāt-, *amaratāt-* 'immortality' (as against *amaṣa-*).

**ahu.mahrk-* 'Leben zerstörend' has only *-maraxš* and *-marac-*; Kellens 1974, 60.

maṣyō.jata- 'von Menschen getötet' and

maṣyō.vaŋha- 'den Menschen bekleidend' will contain *maṣya-* unchanged.

paṣu.pā- 'die Brücke bewachend' V 13. 9 (Kellens 330 ff). This compound must contain a fixed *paṣu-*.

frātat.carata- = /fra-tacar-ta-/ 'fliessend'. No clear Skt. parallel.

vahrkō.barata- 'von Wölfen getragen', and

vahrkō.jata- 'von Wölfen getötet' contain fixed *vahrka-*.

/fravarat/ (*fraorat*) 'continuously' or 'avec zèle'. See on *-t-*.

Forms in -t-

These forms are in Sanskrit accented on the second member, II 1 §90b, 92a.

aš.barat-, *ā-.vayū-*, *vāstrō.-*, (*vāstram.-*), *vohu-*, *huš.ham-* '...bringend' *ātra.karat-*, *duš-*, *yās-* '...machend'.

hvārat-, *taxmārat-*, *uγrārat-*, *vazārat-*, *zaoyārat-* '...sich aufmachend', /hva--ṛ-t-/ etc.

ratuš.marat- (/ratu-šm-/ 'qui mémorise les règles' Kellens 1974, 143

ham.starat- see   **ham.starata-*.

**-darat-* see Kellens 1974, 132.

Apparently a stem in *-ṣ* < *-ŕt* was not tolerated; cf. above and the root noun /prt-/.

Forms in -ta-

Compounds in *-ta-* accent the first member in the oldest Sanskrit (II 1 §93). Later they become mostly oxytona.

araθβyō. *bərəta-*, *hu-*, *niž-*, *spō-*, *vayō-*, *vātō-*, *vəhrkō-*, *yasō-* '..vertragen, gebracht'

a-dərəta- 'nicht geerntet'.

frārəta- < **fra-ṛ-ta-* n. 'Zuweisung'. Perhaps oxytone according to §93a.

apaiti.ərəta- 'ungehindert'.

ā-gərəpta- n. 'Bedrohung mit bewaffneter Hand'.

uz-gərəpta-, *an-aipi-* '...gehoben'

hu-kərəpta- 'schön geformt'.

dahmō.kərəta-, *dāityō-*, *hu-*, *tanu-*, *xšaθrō-*, *yasnō-*, '...gemacht'.

upa.mərəta-, *hu-fra-*, *vacō-*, *aiwi-šmarəta-* '...aufgesagt'.

a-sərəta- 'nicht gebrochen'.

hu-starəta-, *xᵛaini-*, *hąm-* '...gedeckt'.

*hąm-starəta- 'compact', Kellens 1974, 144 (ms. *-stərətəm*).

a-stərəta- 'nicht niederzuwerfen', Skt. *ástṛta-*.

an-a-stərətəm 'ohne sich zu versündigen'.

fra-varəta- from ²*var-* 'to choose'.

a-xᵛarəta- 'unfassbar'.

an-ā-zarəta- 'nicht erzürnt'.

But *anaṣa-* 'ungemahlen' has unchanged *aṣa-*
Different are

aməṣa- 'immortal', agrees with Skt. *amṛ́ta-*.

yaθa.kərətəm 'bei richtiger Bereitung', Skt. *yathākṛtám*.

Nouns in -ti-

Accentuation as with *-ta-*, on the first member, rarely oxytone.
Wit zero grade *-ərəti-*:

-bərəti- (*aš-*, *fra-*, *duž-*, *gāmō-*, *hąm-*, *hu-* (*fra-*), *niž-*, *paiti-*, *upa-*, *uštā-*, *vantā-*, *vāxš-*; *a-iniž-*)

-ərəti- ((*a*)*frārəti-*, *frōrəti-*, *paiti-*)

-gərəpti- (*vī-*)

-kərəti- (*ā-*, *fra-*, *frašō-*, *han-*, *rānyō-sk.*, *vohu-*, *yasnō-*.)

-mərəti- (*ava-*, *fra-*, *hu-*, *hu-fra-*)

-pərəti- (*ā-*)

-stərəti- (*barəsmō.*, *an-ā-*)

-vərəti- (*ā-*, *fraorəti-*, *hąm-*, *vistō.fra-*)

With (partly graphic?) *-arəti-*:

-harəti- (*nišaŋharətayaēca*)

-jarəti- (*aiti-*)

-*tarəti-* (*paiti*)
-*varəti-* (*aiβi-*)
-*varəti-/-vərəti-* (*hạm-*)
-*xᵛarəti-* (*haoma-, fraŋuharəti-*)

With -*aṣi-* only:

fravaṣi- 'Fravaši' from **pra-vrHti-* from *var-* 'to ehoose'. In Sanskrit these forms are rarely paroxytonon (*su-śákti-*§94b). The same situation is found in Avestan. But the faet that it indicates a person, a being, may be decisive.

Nouns in -tar-

Sanskrit accents the suffix when the simplex was oxytonon, but the preverb when the simplex was paroxytonon (II 1 p. 218e).

-*bərətar-* (*ā-, fra-*)
-*barətar-* (*hạm-b.-vaŋhvạm*)
-*carətar-* (*fraš̄o.*)
-*harətar-* (*niš̌-*)
-*jarətar-* (*aibi-*)
-*marətar-* (*fra-*)
-*varətar-* (*fra-*)

Determinatives ending in an adjective

Such compounds are not found among the relevant forms.

23b. *Determinatives ending in a substantive*

In Sanskrit these compounds accent the first member if this is *a(n)-, su-, pra-, vi-* (and sometimes others), and in a few other cases (II 1 §105a). Otherwise the second member is aeeented, mostly on the last syllable (§105b).

carətu.drājah- 'the length of a c.'. Or bahuvrihi?

astvat̰.ərəta- name of a Saošyant, orig. 'der das leibhafte Reeht ist'. Cf. *uxš̌yat̰.ərəta-* (gov. eomp.), and see on *aṣa-*.

hunarətāt- 'skill'. (Skt. *sunŕ̥tā* does not have the same suffix, and also differs in having the zero grade of *nar-*.)

cinvat̰.pərətu- 'the Bridge of the Cinvat'.

zəm.varəta- 'Erdklumpen'.

a-xᵛāṣa- n. 'Nichtessen' contains fixed *xᵛāṣa-*.

23e. *Bahuvrihis*

In Sanskrit bahuvrihis accent the first member, mostly on the same syllable as the simplex (II 1§113a), but sometimes on its last syllable

(§113b). The second member is accented after *a(n)-*, *su-*, *dus-* (§114a), and after disyllables in *-i*, *-u* (§114d).

an-arəta- 'dem heiligen Recht feind' must have *an-* accented as in some Vedic forms, §114 a Petit.

arətō.karəθna- 'wofür die Erfüllung der religiösen Pflicht bezeichnend ist' (**karəθna-* 'perfectio'). The form could have **artá-*, or it could be accented on the second member according to §115.

carətu.drājah- 'with the length of a c.' Or is it a determinative?

dərətō.sraoša- 'à l'obéissance ferme' DG p. 161. **dŕtá-* is the expected form.

a-δərətō.tkaēša- 'der den Lehrer nicht achtet' probably accented *a-*.

aipi.ərətō.gātu- 'der einen fest zugewiesenen Platz hat'.

aiβi.ərətō.gātu- idem. Both these words also with *an-*.

uzgərəptō.drafša- 'with (the) banner raised high'.

vouru.kaṣa- epithet of a lake, taken as 'mit weiten Buchten', litt. 'Einschnitte'. Either it contains a fixed noun **kaṣa-*, or it agrees with §114d.

tanu.kəhrp- 'die Gestalt der eigenen Person habend', and

hukəhrptəma- 'à la belle structure'. Both forms may have the second member accented according to the rules cited, or have *kəhrp-* from the noun.

aspō.kəhrpa- 'ayant la forme d'un cheval', and

maxši.kəhrpa- 'with the form of a fly'; *kəhrp-* will be the form of the simplex.

jaini.mahrka- unclear; cf.

vispō.mahrka- 'qui cause la destruction de tout'. Contains *mahrka-* unchanged.

parətō.tanū- 'whose body is due, forfeited';

pəṣō.tanū- idem;

pəṣō.sāra- 'whose head etc.';

apərətō.tanū- 'makellosen Leibes';

pəṣō.cingha- 'mit weit auseinandergezogenen Klauen';

pəṣō.parəna- ',, Federn'.

In *a-p.* the accent will have been on the last member according to the rule cited. However, in the other forms we expect **prtá-*. This would agree with *parətō-*, but this form occurs only N 42 and V 7.52 in a citation in the pehlevi-translation, whereas *pəṣō.tanū-* occurs ten times. Therefore *parətō-* will be a restored form (*arə-* could be graphic for *-ərə-*). We must posit **pŕta-*. Cf. *məṣa-*.

xvaini.starətu- 'mit schöner Decke'.

ništarətō.spaya- 'mit hingebreiteten Kissen';

starətō.barəsman- 'with the b. spread out' have regular **stŕtá-*.

stəhr-paēsah- or *paesaŋha-* (DG §60n; cf. Skt. *viśvá-peśas-*).
vītərətō.lanū- litt. 'qui a le corps emporté'.
θβāṣa.gāman- 'au pas rapide' (the adjective is *θβāṣa-*).
drvō.varəta- 'der einen gesunden Aufenthaltsort hat'.
guθō.varəta- 'sich im Kot aufenthaltend'.
varəta.fšu- 'qui tient du bétail enfermé'.
varəta.vīra-   ,,   des guerriers enfermés'.
varəta.raθa- 'mit rollendem Wagen' (cf. *vāṣa-* 'Wagen').
a-varətā- 'objet précieux', litt. 'ayant de la valeur en soi' DG p. 185.
vəhrkō.ciθra- 'vom Wolf abstammend'.

23d. *Governing compounds*

These compounds have the accent on the first member in Sanskrit (II 1 §120a).

dəjīt.arəta- 'violator of Arta'. In LAv. we find *jit.aṣa-* after the noun *aṣa-*.

uxšyat.arəta- name of a Saošyant; litt. 'das heilige Recht mehrend'.
vikarət.uštāna- 'das Leben zerstörend'. The forms in *-Cr-t-* never present *-š-*.

vanat.pəṣana- 'die Schlacht gewinnend' should have *-prtana-*, but has the form of the simplex.

barət.avarətā- 'Kostbarkeiten bringend'.

24. *Forms not discussed*

Not discussed are forms where *r* is the end of the stem and *t* the beginning of the ending, where *-rt-* is everywhere retained; e.g. */bar-tu, var-ta/*.

Isolated forms:

fsəratu- I read as */fsratū-/*, which is not relevant.

masa- 'man' seems not to exist. See Insler on Y 29.11a, who reads *mām aṣā* for *mā maṣā*.

muštəməṣa- 'myrtle' is unclear as to its formation.

25. *Conclusions*

The compounds are not very instructive. Therefore the proof must be provided by the simplicia.

25a. Simplicia

The words in *-ti-*, *-tu-*, *tā-*, *-tāt-*, *-tar-* have no exact equivalents in Sanskrit. With the other formations the situation is as follows:

	agrees with Skt.		does not agree	
-ta-			(aṣa-	r̥tá-)
			(aṣā́van-	r̥tā́van-)
			(θβāṣa-	tūrtá-)
			marəta-	mártà-
root	kəhr̥p-	*kŕ̥p		
-a-	vəhrka-	vŕ̥ka-	mahrka-	marká-
other	maṣya-	mártya-		
	pəṣanā-	pŕ̥tanā-		

As to the forms not agreeing, aṣa- presents several problems; aṣā́van- goes together with it; θβāṣa- can be a different formation than tūrtá- (i.e. *tvar(H)ta-). So really only marəta- and mahrka- remain.

The forms agreeing are isolated forms of different structures, so their agreement is significant. But the numbers are not very significant, so we must look at the different categories.

-ta- have:

aṣa-	kəṣa-	darəta-	dərəta-
aṣa-	məṣa-	karəta-	dərəta-
aṣā́van-		marəta-	
θβāṣa-		patarəta-	
θβāṣa-		sarəta-	
xᵛāṣa-		varəta-	

Carta- has both accentuations; this is what one would expect. But we would expect that Crta- would be oxytonon. məṣa- is strange, but compare pəṣō.tanū. Note that aṣa- from *r̥tá- has the same unexpected accent.

-ti- agrees with Sanskrit in being oxytone (-arəti-, -ərəti-); only aṣi- would be paroxytonon, which accent occurs in Sanskrit too.

-tu-. Only pərətu-/pəṣu. Sanskrit accents both root and suffix of u-stems (II 2 §488a).

-tā- carətā- disagrees with Sanskrit, but agrees with Greek.

-tāt- agrees with Sanskrit -átāt- (kahrka- being a fixed noun).

-tar- shows both accentuations, as in Sanskrit.

other formations. Note that narəpiš and karəpan- agree with the corresponding Sanskrit categories, and that marətan- is no problem.

The conclusion regarding the simplicia is that there is a large agreement with the Sanskrit forms or categories. Some deviations, of course, are only to be expected.

25b. Compounds

There are hardly any forms that have an exact counterpart in Sanskrit. And the general rules of Sanskrit are complicated and show many excep-

tions. Therefore a strict argumentation is often impossible. Often we find that they contain the form of the simplex unchanged; e.g. *aṣa-*, *kəhrp-*, *maṣya-*, *pəṣanā-*, *vəhrka-*.

Forms that have an exact counterpart in Sanskrit:

agree with Skt.	do not agree
aməṣa-	*amŕta-*
astərəta-	*ástṛta-*
yaθa.kərətəm	*yathākṛtám*
(*an-arəta-*	*ánṛta-*)

The separate categories give the following picture.
Determinatives in vb.noun/adj.
-*t*- stem final -*ṣ* was not tolerated;
-*ta*- agree with Sanskrit;
-*ti*- agree with Sanskrit (also *fravaṣi-*?);
-*tar*- agree with Sanskrit.
Determinatives in a substantive: agree with Sanskrit.
Bahuvrihis are less clear. A remarkable agreement is *stəhr-paēsah-*. -*kəhrpa*- will have been influenced by the noun *kəhrp-*. On *pəṣa-* (two forms) see above on *maṣa-*. The difference *pəṣō.tanū-* : *apərətō.tanū-* seems to confirm that they are the regular outcome of **pŕta-* : *áprta-* (or **aprtatanū-*?).

Governing compounds agree with Sanskrit. Most remarkable are /*djit-arta-*/ and *uxšyat.ərəta-*.

Though the evidence of the compounds is less clear and less reliable, on the whole it confirms that of the simplicia.

Remarkable is *mahrka-* : *marakaēca* /*markai-ca*/ Y 31.18c. Further we find this phenomenon perhaps in *ā rəitīmca* if this is **araitīmca* beside *aṣi-*, and in *kərətāšca* (cf. *kərətīšca*) beside *kəṣa* (*kaṣa-*). (F 3h *kərəfəmca* probably has *kərəf-* from the nominative *kərəfš*.)

26. Date

In discussing *pərətu-*/*pəṣu* we suggested that the (decisive phase of the) development was post-Gathic, but this word alone is not enough to decide the matter.

/*marta-*/ is found only in Gathic. It cannot be excluded that it was **márta-* and that Gathic did not have the development to *hrt*, *ṣ*; as it did not or rarely occur in LAv., it was not replaced by **maṣa-* in the Gathic text. (Influence of *marətan-*, and **mṛtá-*?, is also possible.)

maṣya- in Gathic is trisyllabic. If this is due to Sievers' Law, it must still have had two consonants preceding -*y*-. But the word can have had -*iHa-*.

Most important seems the fact that, though there is some leveling (*kəhrp-* in all forms, compounds with the form of the simplicia), forms like *mahrka-* : /*markaí-ca*/ coexist and, even more remarkable, *aṣa-* beside *arəta-* in compounds (note that /*djitarta-*/ is indeed replaced later by *jit̠.aṣa-*). It is not probable that such forms coexist for centuries in a language. This means that in the time of the Gāthās (if the development is not later at all) the development was probably still entirely automatic, i.e. dependent on the accent. This means that *ṣ* was not a phoneme in Gathic, so that it is sufficient to note the accent: /*márka-, markaí-ca*/.

3. Final conclusions

Both phenomena indicating the place of the accent (*x́* and *ṣ* etc.), then, show that the place of the stress agreed in great lines with that of Sanskrit, though there are several divergences in detail (in which case Iranian must not always be the innovator). This is exactly what we expect from two closely cognate, but clearly distinct languages. The evidence is too meagre to find the rules according to which the accent was changed.

As to the date, both for *ṣ* etc and for *x́* (see on *zax́yā-cā* in section 1) there is some indication that the developments from which we draw these conclusions, are themselves post-Gathic. If *hv* > x^v was due to the accent, it is parallel to *hy* > *x́y*. We saw that x^v is post-Gathic. *-āat̠cā* for *-āt̠cā* shows that the accent was drawn to the syllable before *-ca*. We saw that this accent-shift caused *hy* > *x́y*. As *-āat̠cā* is post-Gathic, the accent-shift was also post-Gathic. Thus the whole complex of phenomena was post-Gathic.

HISTORICAL PHONOLOGY

1. Introduction

1.1 The PIE phonemic system

		tenuis unvoiced	media voiced	aspirate	new interpretation: plain fortis	preglott. lenis	aspir. lenis
stops		labials	p	b	b^h	p	$\prime p$	p^h
		dentals	t	d	d^h	t	$\prime t$	t^h
	dor-sals	palatals	$\hat{k}$	$\hat{g}$	$\hat{g}^h$	$\hat{k}$	$\prime\hat{k}$	$\hat{k}^h$
		labio-vel.	k^w	g^w	g^{wh}	k^w	$\prime k^w$	k^{wh}
		velars(?)	k	g	g^h	k	$\prime k$	k^h
sibilant			s					
	reso-nants	liquids	r	l				
		nasals	m	n				
		semi-vowels	i	u				
		laryngeals	h_1	h_2	h_3			
vowels			e	o				
			$\bar{e}$	$\bar{o}$				

On the new interpretation of the system of stops see §2. The new notation is used only when the new interpretation is essential.

The existence of a set of velars is not certain, but the traditional reconstruction is followed here.

1.2 The main developments in Indo-Iranian

PIE			Av.		OP		Skt.		
p	b	b^h	p	b	p	b	p	b	bh
t	d	d^h	t	d	t	d	t	d	dh
$\hat{k}$	$\hat{g}$	$\hat{g}h$	s	z	θ	d	$\acute{s}$	j	h
k^w k	g^w g	g^{wh} gh	k/c	g/j^1	k/c	g/j^1	k/c	g/j	gh/h^1
s			$s/\check{s}/h/\emptyset^2$		$s/\check{s}/h/\emptyset^2$		$s/\d{s}^2$		
r	l		r		r		r	(l)	
m	n		m	n	m	n	m	n	
i	u		i	u	i	u	i	u	
H			$i/\emptyset^5$		$i/\emptyset^5$		$i/\emptyset^5$		
e	o		a	$a/\bar{a}^6$	a	$a/\bar{a}^6$	a	$a/\bar{a}^6$	
$\bar{e}$	$\bar{o}$		$\bar{a}$		$\bar{a}$		$\bar{a}$		

1. *c*, *j*, *h* before PIE *ě*, *i*.

2. *š*, *ṣ* after *i*, *u*, *r* and dorsals; in Iranian *s* before and after stop, and before *n*, otherwise *h*; Av. *h* > *o* before *m*, OP *h* > *o* before *r*, *m*, *u*.

5. *i* in final syllables; in Sanskrit *i* also in most other positions, in Iranian rarely in the first syllable.

6. *ā* according to Brugmann's Law (in open syllables).

A survey of the Avestan developments of the consonant clusters is given in 38.

2. The stops

21. For a survey of the developments see 12.

In Iranian the aspirated stops lost their aspiration. This happened also in Balto-Slavic and Germanic and was probably a dialectal Indo-European feature. In Balto-Slavic the original preglottalization was preserved, whereas the voiced stop from the aspirate was not preglottalized. In Indo-Iranian the preglottalization was still present at the time of Lubotsky's Law (see 53.2) and is preserved in modern Sindhi.

22. The sounds

p

/*pati-*/ 'lord', Skt. *páti-*, Gr. *pósis*.

/*paru-*/ 'much', Skt. *purú-*.

/*kṛpam*/ 'form' As, Skt. *kṛp-*, Lt. *corpus*.

t

/*tanuʔ-*/ 'body', Skt. *tanū-*.

/*tamah-*/ 'darkness, Skt. *támas-*, Lat. *temere* 'blindly'.

/*zautar-*/ 'priest', Skt. *hótar-*.

k̂ > *s*

/*sāsti*/ 'to teach', Skt. *śāsti*.

/*sravah-*/ 'teaching', Skt. *śrávas-*, Gr. *kléos*.

/*darsam*/ 'I saw', Skt. *ádarśam*, Gr. *dérkomai*.

kʷ > *k*; *c* before PIE *ě*, *i*

/*katara-*/ 'which of the two', Skt. *katará-*, Gr. *póteros*.

/*kainā*/ 'punishment', Gr. *poiné*.

/*ciš*/ 'who?', Gr. *tís*, Lat. *quis*.

/*hacatai*/ 'to follow', Skt. *sácate*, Gr. *hépomai*, Lat. *sequor*.

/*vacah-*/ 'word', Skt. *vácas-*, Gr. *épos*.

k > *k*; *c* before PIE *ě*, *i*

/*kaniʔ-*/ 'girl', Skt. *kanyà* if to Gr. *kainós* 'new' as **konHi-*.

/*kṛp-*/ 'form', Skt. *kṛp-*, Lat. *corpus* (perhaps **kʷṛp-*).

(With *x-* according to 31 /*xrūra-*/ 'cruel', Skt. *krūrá-*.)

b

No certain evidence

$b^h > b$

/brātar-/ 'brother', Skt. *bhrā́tar-*.

/būmiʔ-/ 'earth', Skt. *bhū́mī*.

/nabah-/ 'cloud', Skt. *nábhas-*, Gr. *néphos*.

d

/daiva-/ 'daeva', Skt. *devá-*.

/vaida/ 'I know', Skt. *véda*.

/mada-/ 'drink', Skt. *máda-*.

$d^h > d$

/dāraya-/ 'to hold', Skt. *dhāráya-*.

/vardati/ 'to grow', Skt. *várdhati*.

$\acute{g} > z$

/zauša-/ 'pleasure', Skt. *jóṣa-*.

/vrzya-/ 'to work', Gr. *érgon*.

/rzu-/ 'straight', Skt. *rjú-*.

$\acute{g}^h > z$

/zasta-/ 'hand', Skt. *hásta-*.

/zūti-/ 'call', Skt. *-hūti-*.

/hizuʔ-/ 'tongue', Skt. *jihvā́*, OCS *językъ*.

/hazah-/ 'power', Skt. *sáhas-*.

$g^w > g$; *j* before PIE $\breve{e}$, *i*

/gman/ 'they came', Skt. *ágman*, Gr. *baínō*.

/gnā-/ 'woman', Skt. *gnā́-*, OIr. *mná*.

/jani-/ 'woman' < *$g^w enh_2$-, OIr. *ben*.

$g^{wh} > g$; *j* before PIE $\breve{e}$, *i*

/garma-/ 'heat', Skt. *gharmá-*, Gr. *thermós*.

/jadyāi/ 'to slay', Skt. *jan-*, Gr. *theínō*, *épephnon* (*j-* here analogical).

$g > g$; *j* before PIE $\breve{e}$, *i*

/ugra-/ 'strong', Skt. *ugrá-*.

/augah-/, Is /aujahā/ 'strength', Skt. *ójas-*.

$g^h > g$; *j* before PIE $\breve{e}$, *i*

/darga-/ 'long', Skt. *dīrghá-*, Gr. *dolichós*.

23. Palatalization

Before PIE $\breve{e}$ and *i* (including *i* before vowel) IIr. *k*, *g* were palatalized.
We find:

	PIE	$k^{(w)}$	$g^{(w)}$	$g^{(w)h}$				
before $\breve{e}$, *i*	Av.	*c*	*j*	*j*	Skt	*c*	*j*	*h*
elsewhere		*k*	*g*	*g*		*k*	*g*	*gh*

For examples see above.

For *kị* > **cy* > *šy* see 35c.

Often the original distribution has been disturbed, but less often than in Sanskrit. E.g.

Av. /augah/   Skt. *ójas*   PIE **h₂euges-*
   /aujah-/   *ójas-*   **h₂euges-*

From the root /aug-/ we have:

inj. /auj-i/   (but ind. /auj-ai/*, sub. /auj-āi/)
   /aug-ža/
   /aug-da/

Here we find the palatalized form generalized before vowel.
Root aorist of *gam-* 'to go':

3s inj.	/jan/	Skt. ind. *ágan*
sub. 1s	/jamā/ ete.	Stk. *gámāni* ete.
impr. 2s	/gadi/	Skt. *gadhí*
3s	/jantu/	*gántu*

It also happened that Avestan introdueed the other representation:
   pres. stem /jasa-/   Skt. *gaccha-*.

3. Clusters with a stop

Compare the survey in 38.

31. Stop + eonsonant

Voiceless stops beeame frieatives before any eonsonant:
   p > *f*, *t* > *θ*, *k* > *x*

/fra/, Skt. *prá.*

/kamnafšva-/ 'small herds', ef. /pasu-/.

/θva-/ 'your', Skt. *tvá-.*

/manθra-/, Skt. *mántra-.*

/xratu-/, Skt. *krátu-.*

/xšapā-/ 'evening', Skt. *kṣap-.*

An exeeption is *-pt-*, whieh remains unaltered:

/hapti/ 3s : /hafši/ 2s.

/haptaθa-/ 'seventh', Skt. *saptátha-.*

/ptā/ 'father' (but /fθrai/ Ds with *θr* < *tr* and *fθ* < *pθ*; thus also /rafθra-/ 'support', root /rap-/).

A preceding *s* prevents the development:

/straʔam/ 'star' Gp.

/āskti-/ 'union'.

Before vocalic *r* the stop was not changed:

/prsa-/ 'ask', but aor. /fraš-/ (*$pre\acute{k}$-s-).

/ātrm/ 'fire' As, but gen. /āθrah/.

Before the PIE suffix -*io*- we find the spirant, as in /haθya-/ 'true', Skt. *satyá*-.

But wen Sievers' Law operated we have the stop:

/naptia-/ 'descendent' (unless we have here the suffix -*iʔa*-, which cannot often be decided).

Here may also belong the development of tenuis + laryngeal to spirant. Formerly it was assumed that this development was Indo-Iranian. Cf. 52.3.

/paθi/ 'path' Ls, Skt. *pathí*.

/prθu-/ 'broad', Skt. *pṛthú*-.

/haptaθa-/ 'seventh', Skt. *saptátha*-.

Here too a preceding *s* prevents the development:

/vaista/ 'you know', Skt. *véttha* (LAv -*θa*, Skt. -*tha* < *-*th_2e).

Note. On *fθ*, *xθ* > *fδ*, *xδ* see II 5.

32. Stop + stop

32a. Dental + dental developed an intermediate *s*-sound already in PIE. In Sanskrit this sibilant was lost, but in Iranian the first dental was absorbed by the sibilant (as in 33a).

$t^s t$ > *st*, Skt. *tt(h)*

/cisti-/ 'thought', Skt. *cítti*- from *cit*-.

/vaista/ 'you know', Skt. *véttha* < *$uoid$-th_2e.

/dastai/ 'he gives' < *da-dH-tai.

This development must be of later date than the development *s* > *š* after *i*, *u*, *r*, *k*, as is shown by /cisti-/.

dd(*h*) > *zd*, Skt. *dd*(*h*)

/dazdyāi/ 'to put' < *da-d^hH-$dyāi$.

/dazdai/ 'he puts' < *da-d^hH-tai (with d^ht > dd^h according to Bartholomae's Law).

/azdā/ adv. 'certainly', Skt. *addhā́*.

/vaizdvam/ 'to find' 2p. *$vaid$-$dvam$.

32b. $\acute{k}$, $\acute{g}$ + dental > *št*, *žd*

/vašti/ 'he wants', *$ue\acute{k}$-ti, Skt. *váṣṭi*.

/abi-dršta-/ 'visible', *-$dr\acute{k}$-to-.

/gržda/ 'he complained', *$g^{(u)}r\acute{g}^h$-to (or with *l* instead of *r*); cf. 1s /grzai/, Skt. *gṛhe*.

/aždyāi/ inf. of /nas-, ʔas-/ < *$h_1n(e)\acute{k}$-.

32c Labial + *k̑* > *fš*,
/*fšuyant-*/ 'cattle-breeder', **pk̑u-*.

32d. Aspirate + stop or *s*: Bartholomae's Law

An aspirate voiced a following stop; the aspiration went to the last element, where it was preserved in Sanskrit but lost in Iranian. Thus **g^h t* > Skt. *gdh*, Av. *gd*. This development must have occurred before the loss of the aspirates in Iranian. Aspirate + *s* has the same development, **g^h s* > **g^h z* > **gz* > *gž* (the *z* became *ž* after labials and velars, see 46. Later the stop became a spirant, *γž*, see II 5).

The most important developments are the following. The developments are complicated by three other developments: a) **g̑d* > *žd* (32b); b) *z* > *ž* after labial and velar (33c, 46); c) *dz* > *z* (33a).

PIE	*b^h t*	Pllr.	*bd^h*	GAv. *bd*	OP		Skt.	*bdh*
	d^h t		*d^z d^h*	*zd*		(*st*)		*ddh*
	ǵ^h t		*jd^h*	*žd*				*ḍh*
	g^{wh} t		*gd^h*	*gd*		(*xt*)		*gdh*
	b^h s			*bž*				*ps*
	d^h s			**z*				*ts*
	ǵ^h s			*ž̆*				*kṣ*
	g^{wh} s			*gž̆*				*kṣ*

b^h t > *bd*, Skt. *bdh*
No examples.
d^h t > PIIr. *d^z d^h* > Av. *zd*, Skt. *ddh*
/*vrzda-*/ 'complete, mature' < **urd^h-to-*, Skt. *vṛddhá-*.
Here the development occurred even though a sibilant had developed between the dentals.
g^h t > *gd*, Skt. *gdh*
/*augda*/ 'he said' < **aug^h-ta*, Skt. *óhate*. LAv. *aoxta* with analogical restoration of the *t*.
/*dibžadyai*/ 'to deceive', **di-(d)b^h-sa-*.
/*didrža-*/ 'to fasten', **di-drǵ^h-sa-*; cf. /*drz-ā*/ 'shackle' ls.
/*didragža-*/ 'to consolidate', **di-drngh-sa-* (or /*didrgža-*/ < **di-drg^h-sa-*).
/*mimagža-*/ 'to present with', **mi-mng^h-sa-*.
/*-augža*/ 'you said', **aug^h-sa*.

33. Stop + *s*
33a. Dental + *s* > **ss* > *s*.
On aspirates see 32d.
/*druguasu*/ < **-uat-su*, Lp of /*druguant-*/.

33b. $\acute{k}s > \check{s}$

On aspirates see 32d.

/daišā/ 1s sub. s-aor. of dis-, *deiǩ-s-.

YH /nāšu/ 'need' Lp of /nā̃s-/, Skt. naś-.

33c. Labial, velar $+ s > + \check{s}$

See 46.

On aspirate $+ s$ see 32d.

33d. Aspirate $+ s$ see 32d

34. $s + $ stop

On $s + $ stop see 41, 42.

34a. $s\acute{k} > s$

/nrfsati/ 'to wane', *nr̥p-sǩ-, cf. /narpiš/. (Note that this s was not changed into š after labial.)

/prsa-/ 'to ask', Skt. pr̥ccháti, *pr̥ǩ-sǩ.

35. Stop + resonant

35a. $\acute{k}, \acute{g} + n > \check{s}n$

/rāšnaʔam/ gen. pl. of /rāzar, rāzan-/ 'pronouncement'.

Analogically sn appears with s from related forms:

/vasna-/ 'will' (/vasmi/ etc.).

/asnaʔam/ if 'heaven', Gp of /asan-/, could also have analogical sn (forms with /asan-/ are frequent). But the form might be from 'day', see b.

35b. Av. *zn > sn

Av. *zn is an Avestan formation. (Av. z originates from $\acute{g}^{(h)}$, but $\acute{g}^{(h)}n$ became šn. Av. z can also represent PIE s, but PIE sn remained sn.)

/yasna-/ 'worship' (Skt. yajñá-) must have been formed from yaz-, cf. /yazati/. It could replace an older *yašna-.

/asnaʔam/ if 'day' Gp, from *azar, Skt. áhar, would belong here too. But it could well be from /asan-/ 'heaven', see a.

35c. ki before vowel $> *cy > \check{s}y$ (on š see II 7.)

/šyauθna-/ 'deed', Skt. cyautná-.

/šyāta-/ 'happy, Lat. quiētus.

35d. $dn > *nn >· n$?

The evidence is not quite certain.

/buna-/ 'ground' could be from *budna-, Skt. budhná-, or from *bundna- (Lat. fundus).

/sinā-/ 'destruction' has been explained from *sidnā-, root sid- 'to split'.

36. Resonant + stop

36a. On rt > š see III 2.

36b. That *nθ* became *nt* was assumed on the basis of LAv. *pantå* Ns beside *paθō* Gs, but the nominative continues **pant-aH-s*, where no *θ* could arise, as against **pat-H-as* > *paθō*. The rule is refuted by /*zanθa-*/ 'birth'.

37. The Avestan correspondences of Skt. *kṣ*, Gr. *kt* etc.

37a. In cases like Skt. *ŕkṣa-*, Gr. *árktos*, the correspondence Skt. *kṣ*, Gr. *kt* can go back neither to PIE *ks* nor to *kt*. Whereas Sanskrit has always *kṣ* (with one exception), Greek has *kt*, *khth* or *phth*. This proves that the velar (or at least one) element could be a tenuis or an aspirate and that, beside velars or palatals, there were labio-velars involved. Avestan *xš* and *š*, both corresponding to Gr. *kt*, show that the tenuis could be a velar as well as a palatal.

The correspondences are as follows:

PIE	-*k*-	Skt.	*kṣ*		Av.	*xš*	Gr.	*kt*
	-*gʷʰ*-		*kṣ*	Prkr. *jjh*		*gž*		*phth*
	-*ḱ*-		*kṣ*			*š*		*kt*
	-*ǵʰ*-		*kṣ,j*			**ž*		*khth*

On *ś* for *š* see II 7.

The Avestan material (LAv. included) mostly adduced is:
-*k*-
/*xšayati*/ 'to rule', /*xšaθra-*/, Skt. *kṣáyati*, *kṣátra-*, Gr. *ktáomai*.
-*g⁽ʷ⁾ʰ*-
/*a-gžanvamna-*/ 'undiminishing', Skt. *kṣanuté*? (Gr. *phthónos*??); or with Skt. *dagh-*, Gr. *phthánō*.
LAv. *γžaraiti* 'to flow', Skt. *kṣárati* (Gr. *phtheírō*??).
-*ḱ*-
/*šaiti*/ 'to dwell', Skt. *kṣéti*, Gr. *ktízō*.
LAv. *arəša-* 'bear', Skt. *ŕkṣa-*, Gr. *árktos*.
/*tašan-*/ 'shaper', Skt. *tákṣan-*, Gr. *téktōn*.
/*rašah-*/ 'damage', Skt. *rákṣas-* (not Gr. *erékhthō*).
/*aši-*/ 'eye', Skt. *akṣí* (not Gr. *ophthalmós*).
-*ǵʰ*-
/*zām*/ 'earth' As, (LAv. *zå*), Gr. *khthôn*.

Further have been connected:
LAv. *saēna-* 'a bird of prey', Skt. *śyená-*, Gr. *iktînos*.

The last form presents more difficulties than the others. Connection with *iktînos* is not certain. An animal's name may have been distorted. It will be left out of consideration.

The connection with Gr. *phtheíro* and *phthónos* are no more than mere possibilities. It is not certain whether these forms had *gʷʰ* or *gʰ*. Gr. *erékhthō* requires an aspirate, which would have given a voiced sound in

Avestan. The formation of Gr. *ophthalmós* is quite unclear, as well as its relation to Gr. *óktallos*, *optílos*.

Zam- 'earth' has unexpected *z* for *ž*. Here Sanskrit has gen. sg. *jmáh* (which shows a voiced palatal; the aspiration is lost), where the element corresponding to the *ṣ* of *kṣ* is absent. If *jmáh* represents a simplified *$\acute{g}$mes*, this form can also be the origin of Av. *zm-*, which would suppose that the nominative was reshaped after the oblique cases. (Cf. *satəm* < *$\acute{K}$mtom* < *d$\acute{K}$mtom*.)

37b. The explanation of these forms is not yet certain. The idea of a separate phoneme (like [θ]) after the dorsal is improbable as there is no trace of this sound elsewhere. A unit phoneme like *kˢ* is improbable because there is no evidence for sounds of this type in the languages of the world.

It is now generally accepted that, at least in some cases, a group of dental + dorsal was at the origin of these clusters. This is shown by Hitt. *tekan* 'earth', which points to a form like *deĝʰōm*, by Hitt. *hartagga* /hartka-/ if this is cognate with Skt. *ŕkṣa-*, and perhaps by Gr. *phthánō* < *dgʷhnuō*, if it belongs with Skt. *daghnóti* 'to reach'. Thus Skt. *jmáh* could represent *dĝʰmos* with simple loss of the dental (and the aspiration). For the shape of roots like *dgʷhei-* cf. *dbʰeu-* in GAv. /dbāvaya-/ and /dbanz-/ < *db(ʰ)enĝ(ʰ)-*.

37c. Avestan has precious evidence for these clusters. Skt. *kṣinóti* 'destroy' corresponds with Gr. *phthínō*, which shows that it contained a labio-velar aspirate. Prakrit *jhi-* (*ákṣita-*, Pr. *ajjhita-* with *jjh* < *djh*, Gr. *áphthitos*) confirms that it was an aspirate. The Avestan form is found in GAv. *dəjīṯ.arəta-* /djitarta-/ 'who violates Arta'. LAv. lost the *d-*: *jiṯ. aṣa-*. The *j* (before *i*) can go back to *g*, *gʷ*, *gʰ* or *gʷh* (*ĝ*, *ĝʰ* would have given *ž*). The etymology is evident and everything fits. *dəjāmāspa-/djāmaʔaspa-/* (L. *j-*) has the same initial cluster. It has been connected with Skt. *kṣāmá-*, Pali *jhāma-* 'burning' as 'having burnt (i.e. fine, costly) horses', or rather 'of black colour (as of a burnt object)'.

In these forms the dental is still preserved. With other dorsals this would have given (I write only *t* and *d*):

tk(ʷ)	Av.	*tk, *tc	>	*c
dg(ʷ)(ʰ)		*dg, dj	>	j
tĶ		*ts?	>	*s
dĝ(ʰ)		*dz?	>	*z

If *ts*, *dz* are correctly reconstructed, and if we assume that these became *s*, *z* early, this could explain *zå*, /zām/.

One might ask whether *ṯkaēša-* 'teacher, teaching' has such a *tk-*. The explanation as due to a false division of a form like /anyatkaiša-/ (L.

anyō.ṯkaēša-) 'having something else as faith' (instead of 'having a different faith') is improbable and it is also improbable that this *t-* was introduced everywhere. It would mean that *ciš-* stands for **ṯciš-*; it is understandable that *ṯk-* was preserved longer than *ṯc-*.

If the forms with *xš* and *gž* are reliable, there are two different developments. This might be explained by assuming dialectal differences (as in Indo-Aryan between Sanskrit and the Prakrit form with *jh-*, but here there are several dialectal differences), but (1) it is possible that there were conditioning factors which still escape us, and (2) it is not certain that all the forms go back to groups with initial dental. It is e.g., still ununderstandable how *ṯk-* could result in Avestan *xš-*.

38. Survey of the clusters

The developments from PIE to Avestan are fairly simple, with the exception of some laryngeal problems and a number of clusters. Of the latter I give a short survey here.

From PIE to Gathic (*kʷ* = *kʷ* or *k*)

sC:	*k̂, ĝC*:		*Cs*, other:
*sk̂ʷe > sca			**kʷi̯ > *cy > śy*
*sdn > sn	**k̂ṯ, ĝd >*	*šṯ, žd*	**ṯṯ, dd > sṯ, zd*
*sn > sn	**k̂n, ĝn >*	*šn*	
*sk̂ > s	**k̂s >*	*š*	**kʷs, gʷs, ps, bs > xš, fš*
	*ĝʰs >	*ž*	**gʰs, bʰs > gž, bž*
	*pk̂ >	*fš*	

(Not included are the developments corresponding to Skt. *kṣ*, Gr. *kt*.)

From Gathic to PIE

sn <	**sn*	*šn* <	**k̂n, ĝn*
	*sdn		
sṯ, zd <	**sṯ, sd*	*šṯ, žd* <	**k̂ṯ, ĝd*
	*ṯṯ, dd		
s, z <	**k̂, ĝ*	*š, ž* <	**k̂s (ĝs), ĝʰs*
	*sk̂		
		fš <	**ps*
			*pk̂
xs <	**kʷk̂*	*xš* <	**kʷs*

4. PIE **s*

PIE had a single fricative /s/. It was voiceless, a voiced variant occurring only under the influence of other sounds. The development of *s* is the following:

s = *s* 1. initially before a stop or *n*;
  1a *sǩ* > *s* (34a)
  2. after *a* before a stop or *n*;
  3. after dental (*ts* > *s*).
s > *š* 4. after *i*, *u*, *r*, *ǩ(w)*;
  5. in -*ns* after *i*, *u*, *r*;
  6. after labials and velars.
s > *h* in all other positions, viz.:
  7. initially except before a stop or *n*;
  8. after *a* except before a stop or *n*;
  9. after *an*, *am*;
  10. word finally after *a*.

41. *s* = *s* initially before a stop or *n*
/*stāumi*/ 'I praise', Skt. *stáumi*.
/*spasya-*/ 'to look', Skt. *páśyati* (with *s* mobile in Avestan).
/*scantu*/ 3p of *sekʷ-*, /*hacatai*/.
/*sāsna-*/ 'teaching', from *sās-*/*sāh-*.
41a *sǩ* > *s*
 See 34a.

42. *s* = *s* after *a* before a stop or *n*
/*vāstar-*/ 'shepherd', Hitt. *westara-*.
/*vastai*/ 'he is dressed', Skt. *váste*.
/*zasta-*/ 'hand', Skt. *hásta-*.
 Before a voiced stop *s* becomes *z*:
/*nazdišta-*/ 'nearest', Skt. *nédiṣṭha-*.
/*mazdaʔ-*/ 'wise', *mns-*.
/*zdi*/ 2s imp. of 'to be', *h_1s-dʰi*
/*dužvacah-*/ 'of evil words'.

43. For *ts* > *s* see 33a.

44. *s* > *š* after *i*, *u*, *r*, *ǩ(w)*
This development has close parallels in Sanskrit, Balto-Slavic and Armenian and must be a dialectal feature of PIE, especially because the conditioning sounds (*i*, *u*, *r*, *k*) are totally different sounds, so that independent parallel developments are improbable.
/*išta-*/ superlative ending, Skt. -*iṣṭha-*.
/*dvaišah-*/ 'hatred', Skt. *dvéṣas-*.
/*mižda-*/ 'prize', Skt. *mīḍhá-*, Gr. *misthós*, *misdʰós*.
/*ušah-*/ 'dawn', Skt. *úṣas-*.

/duš-/ 'bad', Skt. duṣ-.

/ršva-/ 'high', Skt. ṛṣvá-.

/dršat/ 'boldly', Skt. dhṛṣát.

k became x before consonant:

/vaxšat/ 3s sub. root-aor. 'to grow'.

/uxšan-/ 'bull', Skt. ukṣan-.

This development did not affect s, z < k̑, g̑(h).

/visva-/ 'all', Skt. víśva-, *uik̑uo-.

/darsata-/ 'visible', Skt. darśatá-, *derk̑eto-.

/usmahi/ 'we want', *uk̑-.

/īsvan-/ 'being lord of', Skt. īśvará-.

It was not found with s < ts:

/us/ adv. 'up', from', *ut-s, Skt. út.

Also st < tt was not affected:

/cisti-/ 'thought, Skt. cítti-, root cit-.

On the other hand it seems that after i < H the development still occurred:

/-iš/ of neuters in *-Hs, e.g. /snaθiš/ 'weapon'.

/siša-/ if from *k̑Hso-, from the root sās- < *k̑eHs-; the form has alternatively been explained from a root with PIE *i̯.

In compounds of which the second element had h- < s- we find š after u. After this š the h of the simplex is reintroduced in the compound: ānuš.haxš 'ready to help' from ānu and sac-, cf. Skt. ānuṣák; huš.haxā 'good friend'.

The same restoration is found in Old Persian, ušhamaranakara- 'good strategist' from (h)u- + ha-, which suggested that this restoration was a linguistic reality. This seemed further confirmed by the analogical introduction of nominative forms in -š in the first member of compounds (instead of the stem, e.g. L. druxš.manah-). On the other hand, the h is not always written: hušāna- 'of good gain' (hu- and san-), Skt. suṣáṇa-, which is /hušana-/, not *huš.hāna-; L. zantušānō, višaptaθa; also G. dušǝrǝθri- 'having bad protection' from *duš-srθri- (not *dušharǝθri-, cf. L. harǝθra-). The forms with -h- are mostly found when the word was split up, which proves that it was an artificiality of the editors. The OP form may have a similar explanation.

45. s > š in -ns after i, u, r

In the acc. pl. of i- and u-stems we find -īš, -ūš, which go back to *-ins, *-uns. Perhaps the vowel was nasalized early, or s became š in spite of the n. The nasalized vowels were long and later lost their nasality.

In /cīzdi/, /cīšmahi/ from *cins-, nasal present of ciš- (cf. /cinas/ 3s), we have the same development.

Neither did *n* block the influence of an *r*: /mātṛnš/ 'mother' Ap. (The acc. pl. of 'father', /fθrah/, shows that the influence of the *r* dates from after the time when *n* became *a*.)

46. *s* > *š* after labials and velars

/dibžadyāi/ 'to deceive', *di-(d)bʰ-sa-, with *s* voiced according to Bartholomae's Law.

/dafšni(ʔ)a-/ 'trickable', *dabʰs- > *dabž-, and *žn* > *šn* (cf. *zn* > *sn* 35b).

/didr(a)gža-/ 'consolidate', *di-dr(n)gʰ-sa-.

/-augža/ 'you said', *augʰ-sa.

　　Note that *s* < *ḱ* became *š* after labial (see 32c).

　　-*r*- blocked the development in /fsratū-/.

47. *s* > *h* initially, except before a stop or *n*

Before *m* the *h*- disappears.

/haθya-/ 'true', Skt. *satyá-*.

/hu-/ 'good', Skt. *su-*.

/hūnu-/ 'son', Skt. *sūnú-*.

/hva-/ reflex. pron., Skt. *svá-*.

/hvafna-/ 'sleep', Skt. *svápna-*, Lat. *somnus*.

/mat/ 'with', Skt. *smát*.

48. *s* > *h* after *a*, except before a stop or *n*

/ahat/ 3s sub. 'to be', Skt. *ásat*.

/manahi/ Ls of *manah-* 'thinking'.

/ahu-/ 'life', Skt. *ásu-*.

/dahra-/ 'wise', Skt. *dasrá-*.

/ahmi/ 'I am', Skt. *ásmi*.

/baxš-ahva/ 2s imp. Med., Skt. *-asva*.

/dahyu-/ 'land', Skt. *dásyu-*.

Note. For the writing (based on phonetic realization or later developments) see II 10 and 11. One finds:

for /aha/:　　　angha aŋha anŋha

　　/ahr/:　　　angr

　　/ahv/: ahv anghv aŋhv̥ anŋhv aŋuh axᵛ

　　/ahy/: ahy axy (with following accent)

49. *s* > *h* after *an*, *am*

-*ms*- became -*ns*- > -*nh*-

/sanha-/ 'doctrine', Skt. *śaṃs-*.

/manhi/ 1s inj. *s*-aor. M. of *man-* 'to think', *man-s-i.

/danh/ Gs. *dam-* 'house'. . . .

A sandhi form is probably preserved in 46.5a *adqs* /*ā dans*/ (followed by *drīlā*).

Note. -*anh*- is written as -*āngh*-, -*anh* as -*āng* (see II 10).

410 -*s* > -*h*

On -*as* > -*ah* and -*ās* > -*āh* see II 18 and II 12.

5. The PIE Laryngeals

PIE had three laryngeals, $*h_1$, $*h_2$, $*h_3$. (*H* is used when it is not known which laryngeal is concerned or when this is irrelevant. Other symbols used for them $ə_1$ etc., or *E*, *A*, *O* resp.) They can be distinguished by their influence on adjacent (both preceding and following) PIE $*e$, which was pronounced [*a*] next to $*h_2$, [*o*] next to $*h_3$. $*H_1$ did not change an $*e$, and $*o$ was never changed.

There is no indication of a different development of the three laryngeals in Indo-Iranian. Apparently they fell together early in PII. It is probable that this development was contemporaneous with the merger of $*e$ and $*o$ in PII.

Between consonants (and after consonant before the word end) a laryngeal could be vocalized into *i* in PII. Between vowels (and initially before a vowel) a consonantal sound continues the laryngeal, which probably was a glottal stop, which is here written ʔ.

A survey of the developments is the following (with # for word end, and : for vowel length):

H before	*V*	*C*	#
#*H*	ʔ	ø	–
VH	ʔ	*V*:	*V*:
CH	ø	ø,*i*[1]	*i*
$r̥H$	*ar*	*ar*	?
$m̥H$[2]	*am*	*a*:	?

1. *i* before two consonants.
2. $n̥H$ is exactly parallel.

51. Word initial laryngeal

51.1 #*HC*, laryngeal initially before consonant

There are a few considerations that suggest that *H*- before consonant was continued by ʔ- in Gathic.

The reduplicated forms *rāraš*(*y*)*a*- were trisyllabic, /*raʔrš*(*y*)*a*-/. This form is not impossible, but it has a strange morphological structure, /*ra-ʔrš*-/. At some time at least it must have been *ʔra-ʔrš*-, and this form may well have been preserved in Gathic.

The noun Ns *āyū*, Gs *yaoš* had /ʔāyu/ in Gathic. It seems possible that here /ʔyauš/ < *Hyauš* was maintained or restored. But if it was restored, it would not prove that ʔC- was regularly retained. Other forms too would present forms with and without laryngeal through ablaut: e.g. /vaxš-, ʔuxš-/ 'grow', from *h₂u(e)gs-.

kamnānar- 'having few man' points to *kamna-Hnar-*. The laryngeal cannot have been lost very long ago, or else the word would have been remade with short -*a*-.

Often it is not possible to know whether a form had an initial laryngeal or not.

For lack of decisive evidence, I shall not note ʔC- for Gathic (or (ʔ)C-).

51.2 *HV-*, laryngeal initially before vowel

Two reduplicated forms show through their number of syllables that the reduplicating syllable was not yet contracted with the root. As the proto-form had a laryngeal, we may assume that these words had an initial ʔ in Gathic.

/(uz) ʔiʔrdyāi/, inf. of /ʔar-/ 'rise', *h₃er-*. The glottal stop was probably also present in the thematized reduplicated present /ʔīratu/ 3s imp.

The laryngeal is confirmed by the two forms that have the augment before a root that seems to begin with a vowel: *as* /ʔaʔas/ 'he was', and *ārəm* /ʔaʔaram/ 'I reached'.

Compounds of which the second element began with a laryngeal have hiatus. The evidence for laryngeal is as follows.

/artă-ʔaujahah, artă-ʔuxšayantāh/; root *h₂eug-* shown by *a*-vocalism (Lat. *augeo*) and Greek prothetic vowel (*aéksō* < *h₂ueg-*).

/hu-ʔapah-/ 'of good work'; Lat. *opus* points to *h₃epos*, as neuter *s*-stems had *e*-vocalism.

As PIE had no words with initial vowel *e- or *o-, the words that have intial vowel in the later languages had a laryngeal in PIE. This explains:

/ciθra-ʔavaham/; etym. uncertain.

/djāma-ʔaspa-, višta-ʔaspa-/; *h₁ekuos*.

/dršta-ʔainaham, paru-ʔainah/; etym. uncertain.

/hu-ʔahaviʔam, parā-ʔahum/.

/hva-ʔita-, hu-ʔiti-/ with zero grade of *h₁ei-* 'to go'; cf. Skt. *suvitá-*.

/hu-ʔarθi(ʔ)a-/; Skt. *sv-ártha-*.

/hu-ʔāθra-/.

/hu-ʔāθrayā/.

No evidence for laryngeal can be found for:

/fra-ʔištāhah, zasta-ʔišta-/.

/fraša-ʔuštra-/; etym. uncertain.

/θvā-ʔištiš/

Uncertain is *paityāstīm*, 53.3c, which seems to have no hiatus; note Y 53.

A problem is presented by:

/*fra-ʔuxtā, hizvā-ʔuxθāiš, šma-ʔuxθāiš*/ which contain the zero grade of *vac-*, which had no initial laryngeal (as appears from Gr. *(w)épos*). It must be assumed that Gathic (or PIE) introduced a glottal stop here.

It is possible, then, that Gathic had a·glottal stop before every vowel. If not, we often cannot know whether there was one or not. Therefore I shall not write word-initial ʔ before vowel.

52. Laryngeal after consonant

52.1 -*CH*, word final laryngeal after consonant

The laryngeal behaves just as *CHC* in final syllable, and is discussed there (52.2).

52.2 *CHC*, laryngeal between consonants

The laryngeal was vocalized to *i* or disappeared without trace (with one exception; see at the end). The development was different according to the syllable in which the laryngeal stood:

    A. in final   syllable : $H > i$;

    B. in medial   ,,   : $H > $ zero;

    C. in initial   ,,   : unclear.

A. *CHC* in final syllables

1 pl. middle ending /-*madi*/, Skt. -*mahi*, *$medhh_2$ (Gr. -*metha*).

1 du. middle ending /-*vadi*/, Skt. -*vahi*, if /*dvadi*/ 29.5b is correctly taken as 1 du. of *dā-*.

1 sg. middle ending -*i*: /*auji, manhi*/.

neuters in -*iš*: /*taviš*, *snaθiš*/ from *$teuH$-s, *$knetH$-s. Analogically in medial syllable: /*snaθišā*/ Is, /*tavišī*/.

Np ending -*ani*: /*sāhvani*/, YH /*nāmani*/.

/*jani-*/ (Np /*janayah*/) 'woman' < *g^wenh_2- (with original Gs *g^wn-eh_2-s, cf. Skt. *gnás*, and from which G. /*gnā*/ is derived).

*/*haxti*/ 'thigh', shown by Gd /*haxtiʔāh*/, Skt. *sákthi*, continues *$saktH$.

The thematic 1s middle ending -*ai*, which was made with the ending -*i*, shows that this development must have been of PII date (because /-*ai*/ was of PII date).

B. *CHC* in medial syllables

In Avestan a laryngeal in medial syllable has always disappeared without trace, whereas it was (mostly) vocalized to *i* in Sanskrit.

/*draunah*/ 'sacrifice', Skt. *drávinas*, *$dréuHnos$.

/*mrautu*/ imp. pres. 'to say', Skt. *brávīti*, *$mleuH$-.

/vṛntai/ 'he chooses', Skt. vṛnīté, *ulnHtoi.

/padbiš/ Ip of 'path', Skt. pathíbhis, *pntHbhi.

/azdbiš/ Ip of 'bone' < *astHbiš (Skt. asthi < *HastH).

/zanθa-/ 'birth', cf. Skt. janitram, *ǵenH-.

/vanta-/ 'praise', cf. Skt. vánitar-, *uenH-.

/dugdā/ 'daughter', Skt. duhitā́, *dhugHtēr. On this form see below.

/asti-/ 'guest', Skt. átithi-, *HatHtH(i)-.

/dasva/ 2s imp. of dā- 'give', *da-dH-sva.

C. CHC in initial syllables

The evidence is very limited. We have:

with i	with zero
/siša-/	/dyāt, syadvam; dvadi/
/piθrai/	/ptā, fθrai/
/dišamna-/?	

/siša-/ is the thematic aorist of sāh- 'to teach' (3s /sāsti/), which agrees with Skt. śiṣa-. It has the zero grade, usual with thematic aorists, of *ḱeHs-: *ḱHsó-. It has also been explained, however, through a root variant with i (beside which there would be a third with u).

/dyāt/ 3s opt. aor. of dā-, *dH-yaH-.

/sya-dvam/ 2p imp. pres. middle of sā- 'cut down', *sH-ya-.
CHi̯- always gives Cy- in IIr, cf. Skt. dyáti 'bind', syáti 'bind'.
This rule does not apply, however, to /dvadi/ < *dH-vadhH.

dīšǝmna- has been derived from *dH-sa- (an intensive without reduplication), but this remains uncertain.

LAv. hita- 'bound' has been connected with /Višta-ʔaspa-/ 'with unbound horses', from *vi-sHto- (with loss of the laryngeal in internal syllable). But hita- may have old -i-.

The word for 'father' has the following forms in Avestan:

GAv.	/ptā/	LAv.	pita, ptā[3]
	/ptaram/		pitarǝm
	/piθrai[1], fθrai/[2]		piθre
		NP	patarō /ptarō/
		A	fǝδrō
		D	ptǝrǝbyō
		ND	pitarǝ

1. 44.7c   2. 53.4a   3. ptā and some other forms may be loans from Gathic.

It is clear that an older paradigm had forms with i and others without. The Gathic paradigm suggests that ptā, ptaram, piθrai was the older system, while /fθrai/ (in Y 53) has the zero grade from the strong cases.

It is most improbable that, if *pitā, *pitaram were original, the -i- would ever have disappeared in these forms.

Probably, then, the laryngeal was vocalized when it was followed by two consonants. The PII paradigm, then, must have been:

ptā́	ptáras
ptáram	ptáras (later ptrás)
piθrás	piθraHam
piθrái	ptŕbhyas
piθráH	ptŕbhis
ptár(i)	ptŕšu
voc. ptar	

(The acc. pl. originally had full grade of the suffix, which was mostly replaced with zero grade in IIr.)

The word for 'daughter' must have had i in the same forms as /ptā/. In *dhugHtar- the laryngeal voiced the following stop in Avestan, giving /dugdar-/ (in Sanskrit it aspirated the g).

Where Iranian has i < H Sanskrit also has i. This development was of PII date. In Sanskrit there must have been a secondary vocalization H > i, which is not found in Iranian: Iranian preserved the PII situation. The developments can be represented as follows:

	init.		medial		final syllable
PIE	H		H		H
PII	i^1	H	i^2	H	i
Ir.	i^1	ø	i^2	ø	i
Ind.	i^1	ø,i^3	i^2	ø,i^3	i

1. E.g. in /piθrai/ (before two consonants); /siša-/, šiṣa-?
2. The i of duhitr- (before two consonants).
3. The secondary vocalization of Sanskrit. It was not general; the conditions are not yet known.

52.3 CHV, laryngeal after consonant before vowel

In this position the laryngeal disappeared. A preceding voiceless stop became a spirant according to the general rule. In Sanskrit a preceding stop was aspirated. The laryngeal was still there and counted as a consonant at the time of Brugmann's Law.

/pai/ inf. of pā- 'protect', *pH-ai. Here the expected f- must have been replaced by p-.

/dadat/ subj. pres. of /dadāmi/, *da-dH-a-t.

/zaya-/ from zā- 'to win', *źH-aya-.

/prθu-/ 'broad', Skt. pr̥thú-, *plth₂ú-.

/-θa/ 2pl. primary, Skt. -tha, *th₁e.

/paθah/ GS 'road'. Skt. pathás, *pnth₁ós.

/raθa-/ (in G. raθī- 'chariot warrior'), Skt. rátha-, *roth₂o-.

/snaθiš/ 'weapon', Skt. śnáthi-ti, points to a root *ḱnetH-, of which the laryngeal was vocalized into i, or before vowel spirantized the t; then both forms were contaminated.

/hušaxā/ 'good friend', Skt. sakhā́, *sek^{w}H-ōi.

There is no instance of f < pH.

The stop was retained after s in Iranian:

LAv. hišta- (G. xšta-? see 63.1b), Skt. tiṣṭha- < *sth₂e/o-.

On Brugmann's Law see 71a.

Formerly it was assumed that the laryngeal aspirated a preceding stop in PII, and that these aspirates developed into spirants in Iranian. However, there is a serious objection to this theory, for the voiced aspirates, e.g. dh, both from PIE dh and from *dH, did not become spirants. Therefore it seems better to explain the fricatives as due to the general development of voiceless stops to fricatives before a consonant in Iranian. This means that tH became θH > θ, just like tr > θr. This implies that these developments are post-PII. Also Iranian never had (inherited) dh < dH. (Another consequence of this interpretation is that the merger of the voiced stops and the (voiced) aspirates of PIE can be much earlier, so that it is possible to assume an isogloss comprising Iranian, Slavic and Armenian where this merger occurred.)

53. Laryngeal after vowel

53.1 -VH, word final laryngeal after vowel

This group behaved as VHC; see there (53.2).

53.2 VHC, laryngeal after vowel before consonant

In the sequence VHC the disappearance of the laryngeal resulted in lengthening of the vowel. The development is post-PIE because in VHs the laryngeal is continued by h in Hittite. That the laryngeal was still present in PII is shown by Lubotsky's Law (see below).

/dadāti/ < *da-daH-ti, cf. /daʔas/ 'gift' < *daH-as.

/dyās, dyāt/ 2,3s opt aor. of dā-, *-ieh₁-s, -t.

/būmyāh/ Gs 'earth', *-ieh₂s.

1 sg. pres. ind. them. /-ā/ < PIE -oH.

Lubotsky's Law. Where one expects a long vowel, from short vowel + laryngeal, followed by a voiced stop, IIr. often shows a short vowel. E.g. Skt. pāj- < *peh₂ǵ- 'make fast' but pajrá- 'firm'. This development is found when the laryngeal was followed by voiced

stop + another consonant. It has been explained by assuming that the voiced stops were still preglottalized sounds (g = 'g), as in PIE, and that the glottal stop resulting from the laryngeal merged with the glottalic element of the stop: $peh_2\acute{g}$- = peh_2'$\acute{g}$- > pa?'$\acute{g}$-ra- > pa'$\acute{g}ra$- = $pajra$-.

In Gathic this accounts for:

/baxša-/ 'distribute' from *$bheh_2g$-, G. $b\bar{a}ga$-, beside (analogical) $baga$-.
/yasna-/ 'prayer', Skt. $y\alpha j\tilde{n}\acute{a}$- (zero grade in Gr. $h\acute{a}gios$, $hagn\acute{o}s$). The present /yazatai/ was originally probably athematic (see 53.3).
/mada-/ 'intoxicating drink' from $m\bar{a}d$-< *meh_2d- (zero grade in Gr. $mad\acute{a}\bar{o}$, Lat. $mad\bar{e}re$); Skt. $m\acute{a}dati$ was probably athematic originally.

$VHRC$, and -VHR, require separate discussion.

The first sequence is found in:

/ma?ah/ 'moon', from *maH-n-s;
/va?ata-/ 'wind', from *h_2ueh_1nto-;
/?i?rdyāi/
/ra?ršya-/, /ra?rša-/.

In these forms the r is syllabic, and the syllabic nasal had developed into an a.

For -VHR the regular development is seen in:

1 sg. opt. /dya?am/ from *dH-ieh_1-m, /hya?am/ from *h_1s-ieh_1-m (with -m added). If *$dy\bar{a}m$ were regular, this would certainly have been retained beside 2, 3 sg. /dyāh, dyāt/. Therefore, in this case too the resonant was syllabic in Indo-Iranian. This implies that the acc. /-$\bar{a}m$, $\bar{i}m$/ of the $\bar{a}$- and $\bar{i}$-stems are analogical (after the nom. -$\bar{a}$, -$\bar{i}$ < -aH, -iH).

Final vocalic -r had become -ar:

/hu?ar/ sun from *$suHr$.

53.3 VHV, intervocalic laryngeal

The laryngeal was preserved in this position in Gathic. Exceptions require an explanation.

Positive evidence is provided by the following forms.

Most clear is the sequence -iHa, -uHa-:

/hu?ar/, gen. sg. /hu?anh/ sun, Skt. $sv\grave{a}r$, from *$suHr$, *$suHens$.
/fri?a-/ friendly, Skt. $priy\acute{a}$-, *$priH\acute{o}$-.
/zu?aya-/ call, Skt. $hv\acute{a}ya$-, *$\acute{g}huH$-eio-.
/dužzu?āh/ nom. sg. speaking evil invocations.
/rž-ji?ai/ dat. sg. living rightly;
/tu?am/ you, *tuH plus a particle -am.
/mru?ai/ I speak, 1 sg. ind. pres. M.;
/su?ai/ to strengthen, inf.

With the suffix *-iHa-*:
/ʔāviš-iʔa-/ manifest;
/hu-ʔahav-iʔa-/ full lifetime.

Gerunds with *-iHa-*:
/išiʔa-/ strong, healing
/variʔa-/ desirable
/zahiʔa-/ risible
/zaviʔa-/ who must be called.

The gen. du. ending was PII *-*Hās*:
/ʔahu-ʔāh, manyu-ʔāh, haxti-ʔāh/.

There are two nouns in *-uH* and one in *-iH*:

As	tanuʔam		raθiʔam
G	tanuʔah	hizuʔah	
D	tanuʔai		
I		hizuʔā	

In 33.10c /tanuʔam/ would give a line of 7-10 syllables (which is not impossible), but the text has been interpreted differently (the laryngeal may have been lost in a compound).

An exception seems to be *xvānval* 53.4c, which can hardly have had /huʔan-/ (note Y 53). *aojyaēšū* 46.12b is another problem. It is a gerundive, which should have *-iʔa-*, but this seems excluded. *daidyat* 44.10d must come from a root *di-*, as against Skt. *dhī-*. The form nom. pl. *-īš* of the *ī*-stems, where PIE had *-ih₂-es*, must be analogical.

Forms where one might expect *-aʔi-* appear to have monosyllabic *-ai-*.

voc. sg. *ā*-stems /brxθai/. The form, then, does not continue *-eh₂-i*. It probably has a vocative ending *-a* (from PIE *-e*) with *-i* (the old nom. ending *-h₂ > IIr. -i*) added.

nom. du. *ā*-stems /ubai/ both, mostly explained from *-eh₂-i*. It may have had *-h₂-ei*.

nom. sg. f. of pronouns /θvai, hvai/, supposed to be *tueh₂-i*, *sueh₂-i*.

The evidence for *-aʔa-* is:
the gen. pl. ending /-aʔam/, on which see below; •
the subj. of roots in *-ā*, see below;
the suj. of them. stems, see below;
nouns with the suffix *-ah-* from roots in *-ā*:

nom.			hudaʔāh, duždaʔāh
acc.	daʔah		
gen.	daʔah-ah	yaʔah-ah	
dat.			hudaʔah-ai
loc.		yaʔah-i	

nom. pl.   *huda?ah-ah, duž-*
dat.   *huda?ah-byah*

nouns with a root *da?-*:
acc. sg.   *mazda?-am*
gen.   *mazda?-ah*
dat.   *mazda?-ai*
ins.   *?āda?-ā*
loc.   *?āda?-i*
nom. pl. *zrazda?-ah*

In the oblique cases *-a?-* was later introduced; the original ablaut is seen in the inf. */pai/* < **pH-ai*.
the suffix *-Hon-/-Hn-* in:
nom. *manθra?ā*   < **mantra-Hā*
gen. *manθrān-ah* < **mantra-Hn-as*
dat.   *-ai* <   *-ai*

/θva?am/ acc. sg. 'you' is found only in 29.10c. The verses of this hymn have 7-9 syllables, with perhaps three instances of 7-10 (1b, 1c, 4c), but none of 7-8. Therefore the form was probably disyllabic.

The *ā*-stems provide several problems (see above on the voc. sg.). The PIE inflection was of the hysterodynamic type:

nom. sg. $-h_2$ (PII **-i*)
acc. $-eh_2-m$ (**-a?am*)
gen. $-h_2-os$ (**-as*)

This explains:
the instr. sg. */-ā/*, from **-h_2-eh_1*.
When the nom. was replaced by *-a?* > *-ā*, the acc. **-a?am* was replaced by *-ām*. In the nom. pl. **-eh_2-es* > **a?ah* must have been replaced by *-āh*. The acc. pl. */-āh/* < *-āns* replaced *-aHns* > *-aHas*.

In the dat. sg. of the *ī*-stems we have */vahviāi/* where PIE had *-ieh_2-i* or *-ieh_2-ei*. The dative must have been reshaped after the gen. */vahviāh/* < *-ieh_2-s*.

The gen. pl. ending */-a?am/* has been explained as originated from the *ā*-stems, where *-h_2-om* > *-(H)-am* was reshaped into *-aH-am*. However, as the *ā*-stems nowhere preserve *-a?-* (we would expect acc. **-a?am*, instr. **-a?ā*, nom. pl. **-a?as*), the disyllabic genitive ending may rather have originated in the PIE *o*-stems, where *-om* was replaced by *-o(H)om*, with the laryngeal to keep the form disyllabic. But the creation of */-a?am/* in the *ā*-stems may have been much earlier than the generalization of the *-ā-*; as a consequence of the introduction of the *ā* the genitive was replaced by *-āna?am*.

The subjunctive of roots in *-ā/-a?* presents:

1s		*daʔ-ānai*		
2	*daʔ-a-hi*			
3	*daʔ-a-t(i)*	*daʔ-a-tai*	*gaʔ-a-t,*	*ʔpaʔ-a-t*
1p	*daʔ-ā-ma*			
2		*daʔ-a-dvai*		
3	*daʔ-a-n*	*daʔ-a-ntai*		

The subjunctive of thematic stems are given in X 5 (presents and aorists).

The endings we find are the following:

	active			middle		
	sec.	prim.	subj.	sec.	prim.	subj.
ath.	*-m*	*-mi*	*-ā*	*-i*	*-ai*	*-āi*
them.	*-am*	*-ā*	*-aʔā*	*-ai*	*-ai*	*-aʔāi*

The ath. subj. act. ending is identical with the them. prim. ending.

The them. subj. and all them. middle endings are innovations. The act. subj. ending was made by inserting *-a-* before *-ā-*, with a laryngeal in between on the model of the ath. forms from roots in *-ā/-aʔ*, **daʔ-ā* (incidentally not attested in Gathic).

The them. middle sec. ending was made by inserting *-a-* before the ath. ending *-i* (which continues PIE *-h₂*). Here there was no pressure to keep the ending in a separate syllable as in the subj. act. *-aʔ-ā*, because (contracted) *-ai* was quite clear, whereas the contraction of *-a(ʔ)-ā* would have been identical with the ind. ending.

The prim. middle ending is analogical after 2, 3 sg. **-sai*, **-tai*.

The middle subj. endings are more difficult. If a thematic subj. was formed, one would expect *-aʔ-ai;* in this way written *-āi* could be interpreted, but it is hard to see how the ath. ending originated in that case. Rather, first an ath. ending was made by adding the subj. *-a-* to the prim. ending, giving *-āi*. However, one might expect *-aʔ-āi* in that case. It seems, then, that the middle endings were simply made by adding *-i* to the active endings.

54. Laryngeal after vocalic resonant
The developments found in Iranian are:

	before *V*	*C*		*V*	*C*
r̥H	*ar*	*ar*	(Skt.	*ir, ur*	*īr, ūr*)
n̥H	*an*	*ā*	(	*an*	*ā*)

54.1 *R̥HC*, laryngeal after vocalic resonant, before consonant
After *r̥, l̥* the development is different from that in Sanskrit, so the laryngeal was preserved down to PIr. and PIA. After vocalic nasal, how-

ever, the results are identical, so probably the vocalic nasal became *a* in PII (after which *aH* developed into *ā*).

**r̥H-C*, *l̥H-C*

/*darga-*/ 'long', Skt. *dīrghá-*, **dl̥Hghó-*.

/*varta*/ 'he chose', **ul̥H-to*.

/*tarvaya-*/ 'overcome', Skt. *tū́rvati*, **tr̥Huo-*.

/*parviya:*/ 'first', Skt. *pūrvyá-*, **pr̥Huio-*.

/*garbiš*/ instr. pl. 'song', Skt. *gīrbhís*, **gʷr̥H-bhi*.

**n̥H-C*, *m̥H-C*

/*ustāna-*/ 'stretched out', Skt. *uttāná-*, from **tn̥H-no-*. This is the only direct evidence in Gathic. In LAv. we have:

LAv. *zāta-* 'born', Skt. *jātá-*, **ǵn̥H-to-*. Indirectly this form is attested in Gathic in /*zānta*/ 2 pl. imp. pres. of *xšnā-* 'get to know', which has *ā* from the verbal adjective (**ǵn-n-H-* would have given **zan-*).

54.1 R̥HV, laryngeal after PIE resonant, before vowel

As the development is different from that in Sanskrit, the laryngeal must have been preserved in this position down to PIr. and PIA.

**r̥H-V*, **l̥H-V*

/*parā*/ 'before', Skt. *purā́*, **pr̥H-*.

/*tarah*/ 'through', Skt. *tirás*, **tr̥Hós*.

/*parauš*/ Gs 'much, many', Skt. *purú-*, **pl̥H(o)u-*.

/*varu-*/ 'broad', Skt. *urú-*, **ur̥Hu-*.

/*garah*/ Gs 'song', Skt. *girás*, **gʷr̥H-*.

**n̥H-V*, **m̥H-V*

/*hana-*/ them. aor. of *han-* 'win', Skt. *saná-*, from **sn̥H-a-*.

55. Word final laryngeal

55.1 *-CH*, after consonant: see 52.1 (= 52.2).

55.2 *-VH*, after vowel: see 53.1 (= 53.2).

6. Resonants

61. PIE *r, *l

In PIE *r, *l could also occur between consonants, i.e. they could be 'vocalic'. As there was only one phoneme, there is no need to write *r̥* for the vocalic allophone; it will be done only in a few cases for the sake of clarity or brevity.

This situation is preserved in Gathic (on the one possible exception see 61a). On *r̥H* see 54.

PIE *l became *r* everywhere in Avestan. (The Avestan alphabet has no sign for *l*. The sign for *l* of the Pahlavi-bookscript was used for *o*.) /*raθi?-*/ 'charioteer', Skt. *rathī́*, cf. Lat. *rota*.

/raucah-/ 'light', Skt. -rocas-, cf. Gr. *leukós.*
/puθra-/ 'son', Skt. *putrá-.*
/ršva-/ 'high', Skt. *r̥ṣvá-.*
/vrzya-/ 'to work', Gr. *érgon.*
/prθu-/ 'broad', Skt. *pr̥thú-,* Gr. *platús.*

61a. r̥ > *ar* before *št?*
In LAv. r̥ had become *ar* before *š, ž.* It has been assumed that in Gathic
this development had taken place only before *št.* There are quite a
number of forms with *aršt* in Gathic:
daršti- 'sight', Skt. *dr̥ṣṭi-.*
paršta- 'question', Skt. *pr̥ṣṭhá-.*
Uncertain are *dužvaršta-, dužvaršnah-; aršnavant-* will stand for **aršánv-.*
Before *š* not followed by *t,* vocalic r̥ remained:
/rš/ 'rightly', /ršva-/ 'high', /drš/ 'wantonness' Nsf.
Also before *žd* Gathic has r̥: /mrždika-/ 'mercy', LAv. *maraždika-.*
But /Cršt/ is also found:
/abi-dršta-/ 'visible', /drštaʔainah-/ 'bringing visible destruction'.
Another instance is /θvrštar-/ 'creator', Skt. *Tváṣṭar-* (< **tvarṣṭar-).* It is
written θβōraštar-, which points to *ərə =* [r̥] with the first *ə* coloured by the
preceding labial, cf. θβarōždūm for /θvaržduam/. Only the fact that it is the
only form in *-tar* with zero grade of the root in Indo-Iranian (even its San-
skrit equivalent *Tváṣṭar-* has full grade) raises some doubt.

   Therefore it is more probable that *ar* before *št* is due to influence of
LAv. This must certainly be assumed for *darašat̰* /dršat̰/ 'boldly', Skt.
dhr̥ṣát, where *arš < rš* is found not before *t.* The YH has *ātarš* Ns from
*ātr̥š, whereas Gathic proper has /audrš, nr̥š, cikaitr̥š/; it must be a younger
form.

61b. -Cr > -Car
Neither Sanskrit nor Avestan has a form in *-Cr.* Skt. *yákr̥t* beside L. *yākarə*
could mean that PIIr. still had *-r̥* (the *-r̥* cannot have been reintroduced
in Sanskrit, as it does not occur elsewhere in the paradigm). But the *-t*
seems to be old, so that the development could be PIIr. (*-r̥t* was preserved
in Avestan, cf. GAv. /fravrt̰/.)

   Old Persian gives no independent evidence as r̥ and *ar* cannot be distin-
guished in the script.

   Gathic has three neuters in *-ar, /rāzar, vadar, vazdvar/.* These neuters
had *-r̥* in PIE. First there is hardly any evidence for (PIE) neuters in **-er.*
Secondly **-er* would have become **-ēr* in PIE. Thirdly it would be very
surprising if Avestan had several neuters in the doubtful **-er* and none
in the well established **-r̥.* Skt. *áhar, ūdhar* (and *svàr*) show the same
development in Sanskrit.

In the 3 pl. forms /ādar/, /āhar/ the ending was certainly -r̥ (*-er had become *-ēr in PIE, as in the perfect ending). In /cikai-trš/ the -r̥- was preserved.

YH /ātar/ 'fire' voc. probably continues *-tr, cf. acc. sg. /ātrm/.

The gen. /audrš/, which is considered a late innovation, can only have been made when the nominative was still *audr. But we have no means to decide when this happened. (/ātrm/ 'fire' As., which replaces an old neuter, must have been made when *ātr still existed in that form.) There is no indication that -ar was not Gathic. One wonders whether the word was static.

61c. On -rt- > -s̤- see III 2.

62. PIE *m, *n

In PIE *m and *n could be either consonantal or vocalic. Just as with *r, *l, there was only one phoneme /m/ and /n/. The indication m̥, n̥ therefore, is not necessary for PIE (but sometimes useful).

In Avestan m̥ and n̥ had become a(m̃), a(n), so that m and n can only be consonantal. (Thus forms like /mr̥ngdyāi, mr̥nždyāi/ have vocalic r.)

m = m

/manah-/ 'thinking', Skt. mánas-.

/tamah-/ 'darkness', Skt. támas-.

n = n

/nabah/ 'cloud', Skt. nábhas.

/hvafna-/ 'sleep', Skt. svápna-.

62a. *ms > *ns > nh

See 49.

62b. mr > nr?

For this development only one form is given, /mānri-/ 'message' or 'pious', if from *ma-mr- (in which case a long ā is improbable). The word is a hapax and the meaning uncertain.

62c. ins, uns > īš, ūš

This development is found in the acc. pl. of i- and u-stems, and one other form; see 45.

62d. m̥ > a; am before resonant and semivowel (before laryngeal see 54).

/dasa/ 'ten', Skt. dáśa.

/jamyāt/ 3s opt. root aor. of gam- (with analogical j-), Skt. gamyās.

62e. n̥ > a; an before resonant and semivowel (before laryngeal see 54).

/aždyāi/ inf. of nas- 'attain', *h₂n̥k̑-.

/rāma/ n. 'rest', < *-mn̥.

/vaꝑata-/ 'wind', Skt. vā́ta-, *h₂ueh₁n̥to-.

63. PIE *i, *u

IN PIE *i and *u could occur in every position. There was only one phoneme /i/ and /u/; there is no need to write i : $i̯$, as they are allophones. This situation changed in Avestan when Sievers' Law ceased to be automatic: there was a difference between y and i after consonant; see section 634c.

631. *i, *u between consonants

Between consonants i and u remained unchanged.

On *iH, *uH see 53.2.

/ciθra-/ 'bright', Skt. citrá-.

/-išta-/ superlat. morpheme, Skt. -iṣṭha-, Gr. -istos.

/druxš, druj-/ 'lie', Skt. druh-.

/puθra-/ 'son', Skt. putrá-.

Note. On $ə$ for i see II 14.8 1, on $əi$ for i II 14.8 n, on v for $i̯v$ see II 18 ad 6.

On u appearing as $ə$ see II 14.8 m, on av for uv see II 25.3.

631a. $ušm-$ > $šm-$?

Beside /yušma-/ (in the oblique cases of 'you' (pl.) and /yušmāka-, yušmāvant-/) we find /šma-/ etc. The $š$- of the latter form presupposes the former presence of a preceding u. Because of /nah, ahma/ from *nas, *$nsma$, we expect beside /vah/ an original *$ušma$-. Therefore *$ušma$- must on the one hand have been changed into /yušma-/ after the nom. /ÿūžam̥/, and on the other hand shortened to /šma-/.

There are two problems. One is whether *$ušma$- > $šma$- is a phonetic development. There is no parallel in Avestan (there are no other forms with $ušm$-, but you have /uštāna-, uštra-/, and there is no other instance of the loss of an initial u-; cf. /uzma-/.) Perhaps the presence of the labial m was essential: it may have had a dissimilatory effect. Therefore the form without u- may be due to a special shortening in very frequent forms. (Then one might also think that not *$ušma$-, but $yušma$- was shortened, especially in the longer form $yušmāka$-.)

The other problem is the coexistence of the two forms in Gathic. In Gathic we find $šma$- 20 times (Y 28.10c is a gloss), $yušma$- 6 times. There is no clear distribution, but $šma$- occurs six times at the beginning of a line.

The situation in Indo-Iranian is as follows:

WestIr.	EastIr.	Sanskrit
OP.?	G. yušma-, šma-	yuṣma-
	L. yušma-	
Mod. *šma-	Mod. *šma-	

If *šma-* goes back to **ušma-*, the *y-* must have been added in Indian and Iranian independently. It has been assumed that *yušma-* came from another dialect, but there is no other indication for this assumption. Most probable is that *yušma-* simply was an archaism. It must then be assumed either that **ušma-* and *šma-* coexisted for some time and that **ušma-* was later reshaped to *yušma-* before it died out, or that the *y-* was of Indo-Iranian date and that *yušma-* was shortened to *šma-*.

The fact that Late Avestan has only *yušma-* (except Y 20,3 *xšmāvōya* which is a rendering of Gathic /*šmabya*/) may not be a decisive counterargument. There are only nine forms (in the whole LAv. corpus, against 26 forms in Gathic). With two exceptions we find only *yušmākəm* as genitive plural, i.e. closely associated with the nom. *yūžəm* (this gen. pl. is not found in Gathic). Here *yu-* was protected because it belonged to the paradigm of *yūžəm*. The forms may well be archaisms too, perhaps taken from Gathic texts (of Y 14.1 = Vr 5.1 = Yt 3.1 the first is pseudo-gathic). (The gloss in Y 28.10c has *šma-*, which may show that this was the normal form at the time the gloss was made. In Y 53.5b /*yušma-*/ would have given a more regular number of syllables, 7-5 instead of 6-5; perhaps *yušma-* had died out by then.)

631b. *hišC-* > *xšC-?*

The form (GAv. 51.4a and LAv.) *xšta-* 'to stand' is equivalent of (LAv.) *hišta-* (PIE **si-sth₂-o-*). If the *-i-* disappeared, the *h-* may have developed into *x-*. The development resembles *yušma-* > *xšma-* (where *y-* perhaps lives on in the *x-*). A separate problem is the coexistence of the two forms (*hišta-* cannot easily have been remade). A purely graphic explanation has also been considered (which is not possible for *xšma-*).

632. **i*, **u* between vowels

/*ayah*/ 'metal', Skt. *áyas-*.
/*janayah*/ 'woman' Np, Skt. *jánayah*.
/*sravah-*/ 'reputation', Skt. *srávas-*, OCS *slovo*.
/*gavai*/ 'cow' Ds, Skt. *gáve*.

633. **i*, **u* after vowel before consonant; the diphthongs

*ei, **oi* > **ai*; **eu*, **ou* > **au*; they fell together with **ai*, **au* from **h₂ei*, **h₂eu*.

Note. Avestan had a closed and an open allophone of each diphthong; see II 19.

/*daiva-*/ 'Deva', Skt. *déva-*, **deiuos*.
/*dvaišah*/ 'hatred', Skt. *dvéṣas-*, **dueisos*.
/*kainā*/ 'punishment', Gr. *poinḗ*.

/márkai/ 'death' loc. sg. in *-oi.

/raucah-/ 'light', *leukos.

/gauša-/ 'ear', Skt. ghóṣa-, *ghouso-.

In anlaut before r, l the u was consonantal in PIE. The development u̯r- > uru̯- is post-Gathic, as is shown by the metre. See I 1.4.

When u̯r- came in inlaut, e.g. through reduplication, it was retained in Sanskrit. Avestan writes -ao- in such cases.

vaorāzaθā /vavrāzaθa/ < *va-vrāz-, 2p sub. pf.

634. *i, *u after consonant before vowel

In general y, v remain in this position. Complications are:

1. *ki̯ > *cy > šy, see 35c.

2. *si̯, *su̯ > hy, hv, see 48.

3. *du̯i > dbi- see 634a.

4. ḱu̯, ǵ(ʰ)u̯ > sv, zv (> sp, zb) see 634b.

5. Sievers' Law 634c.

Note. On θu̯ = [θβ] see II 5.

Note. There is no Gathic evidence for *pu̯ > *fv > f.

/svanyah-/ 'holier', comp. morpheme -yah-, < *-ie/os-.

/haθya-/ 'true', Skt. satyá-.

/harvatāt-/ 'health', Skt. sárva-.

/svanvant-/ 'bringing good fortune'.

634a *dui > dbi

For *due/o > dva cf.

/dvaišah-/ 'hatred', Skt. dvéṣas-.

/dvafša-/ 'distress'.

/-dvam/ 2p Med., Skt. -dhvam.

For *dui > dbi cf.

/dbišya-/ 'to hate', /dbišvant-/ 'inimical', Skt. dviṣ-

/dbitīyam/ 'for the second time', Skt. dvitīya-.

That this development was already Gathic may be shown by the difference with LAv. We find the notations

G. daibi- : L. t̮bi-, bi-

This shows that in LAv. the dental was pronounced very slightly and soon lost, whereas it was known that Gathic required a full dental stop, a sequence which one could only pronounce by inserting a vowel (which even got epenthesis); daibi- will represent [dᵊibi] as realization of /dbi-/. This situation can hardly have arisen if Gathic still had *dvi-.

634b. *ḱu̯, *ǵ(ʰ)u̯ > sv, zv (> sp, zb?)

Our text has in all cases sp, zb; e.g.

aspā- 'mare', Skt. áśva-

vīspa- 'all', Skt. víśva-.

However, in the case of *zbaya-* 'to call' the metre shows that it still was /zuʔaya-/, so here the development to *zb-* was much later than Gathic. *isvan-* 'being lord of' (Skt. *īśvará-*) is written with *sv*, but it could have analogically restored *sv*. As the only evidence we have is that the development was much later, we shall accept that Gathic still had *sv*, *zv*. The change is not PIr., as OP has *s* < *k̯u̯*

634c. Sievers' Law

The evidence for a pronunciation *-iy-*, *-uv-* of /y, v/ after consonant when that consonant was preceded by another consonant, a diphthong or a long vowel (Sievers's condition) is not quite clear. Most suffixes have a fixed form. Thus: /-byah, -dyāi/, comp. /-yah-/, pres. /-ya-/, fut. /-sya-/; endings /-dvam, -dvai/ and imp. /-hva, -sva, -šva/; nominal /-va-, -vant-/, pf. ptc. /-vah-/. Initially *Cy-*, *Cv-* is not to be read *Ciy-*, *Cuv-* (in a very few places the metre would be better, but they are too rare to be accepted).

The nominal suffix *-ya-* must often be read [*-i(y)a-*]:

Sievers' condition	no Sievers' condition
/dafšnia-/ 52.8a	/āviši?a-/ 31.13a, 50.5c
/fšanhia-/ 31.10b, 49.9a	/hu?ahavi?am/ 53.1c
/hu?arθia-/ 28.10c	/manahi?am/ 53.6d (?)
/išāxšaθria-/ 29.9b	uncertain:
/jīvia-/ 32.7b	/vrzanya-/ or /vrzani?a-/ 33.3a
/naptia-/ 46.12a	
/parvia-/ 26 times	
/aparviam/ 28.3a	
/staumia-/ 33.8b	
/vaipia-/ 51.12a	
/vantia-/ 28.10c	
/(a)vāstria-/ 10 times	
/yasnia-/ 30.1b	
/zavištia-/ 3 times	
but	
/sardya-/ 33.9a	
/xrūnya-/ 46.5e, (if *ū*, not *u*)	

Note that /manahiam/ 53.6d stands in a line that presents difficulties.

As we must assume a suffix *-i?a-* < *-iHo-* for IIr., which accounts for the right column, a number of the cases in the left column may also contain this suffix. If one assumes that *all* instances of /-ia-/ really contain *-i?a-*, the two exceptions to Sievers' Law (/sardya-, xrūnya-/) can also be explained: they (alone) contain simple *-ya-* < *-i̯o-*. But this does not seem a probable conclusion.

The nouns with *-ī-/-yā-* present two relevant forms:
/vahviā-/ fem. of *vahu-* 33.12b, 48.5b, 51.10c, 17b, 53.4d
but
/būmyāh/ 32.3c
(unless 32.3c is to be read */yāiš̌* [a]*sru(ž)dvam būmiāh haptaθai/*).
Note that one is a substantive, the other an adjective. */vahviā-/* must be
due to Sievers' Law. Cf. RV *vásviā*.)

With *-v-* only one form has *-uv-* before vowel that seems due to Sievers'
Law: */Haugua-/* nom. voc. sg. 46.16b, 17b, 51.17a.18a. This name is
derived from **hu-gu-* 'having good cows': **hau-gu-a-*.

It seems probable, then, that some words of the list of *ia*-forms are due
to Sievers' Law. Proof seems to be provided only by */vahviā-/* and
/Haugua-/. Because of the fixed suffixes, given at the beginning, where
many forms have Sievers' condition, the law was no longer automatic,
which means that we must accept separate phonemes, /i/ and /y/, and /u/
and /v/.

7. The PIE vowels *e, *o and *ē, *ō.

71 The PIE vowels fell together in *a* and *ā* respectively. This must have
happened after **k(ʷ)*, *g(ʷ)* became *c, j* before **e, *ē.

For *a = h₂e* and *ā = eh₂* see 5.
On Brugmann's Law see 71a.
On the diphthongs **ei, *oi* etc. see 633.
/ca/ 'and', Skt. *ca*, **kʷe*.
/manah-/ 'mind', Skt. *mánas-*, Gr. *ménos*, **ménos*.
/darsata-/ 'visible', Skt. *darśatá-*, Gr. *-dérketos*, **derketos*.
/fra/, Skt. *prá*, **pro*.
/garma-/ 'heat', Skt. *gharmá-*, **gʷʰormo-*.
/nā/ 'man', Skt. *nā*, Gr. *anḗr*, **h₂nēr*.
/brātā/ 'brother', Skt. *bhrā́tā*, Lat. *frater*, **bhréh₂tēr*.
/āsu-/ 'quickly', Skt. *āśú-*, Gr. *ōkús*.
/dātā/ 'giver', Gr. *dōtōr*.
/-āt/ abl. sg. ending of the *o*-stems, **-ōt*.

71a Brugmann's Law

A short **o* in open syllable, at least before resonant is represented by long
ā in IIr. This development must be of IIr. date.

In Gathic one finds three categories as evidence and one isolated form,
but there is no counter-evidence. Even the opposition 1s : 3s pf. cannot
be documented.

The first category is that of the causatives, which have */dāraya-, mānaya-/*
etc. from **moneie-* etc. The long vowel spread to roots ending in other

consonants than *r*, *l*, *m*, *n*, e.g. /*rāhaya-*, *rāšaya-*/, but not to roots ending in a cluster, e.g. /*vardaya-*, *varzaya-*/. This is sufficient to prove the working of the law.

The second category is the 3 sg. pass. aor., type *CoC(C)-i*. We have /*srāvi*/ but /*mravi*/ < **mrauHi*.

The third category are the accusatives type /*dālāram*, *ruꝛānam*/ from **-or-m* etc.

An isolated form is /*āyu*/ 'time of life', **h₂oiu*.

8. Word final developments
81 Vowels and diphthongs
81a. Long and short vowels

All final vowels were written long in the Gathic texts, but this was no linguistic reality; see II 21.8.

81b. Long diphthongs

/*-āi*/ is found in the dat. sg. of *o*-stems, but we have /*-ā*/ in Ns /*hušaxā*/ < **sokʷHōi* and in the loc. sg. of *i*-stems, /*vidātā*/ 'distribution'. The situation in Sanskrit is the same (cf. *sákhā*, *śúcā*), so it will be an IIr. heritage. The loss of the *-i* must be a phonetic development. Probably the ending of the dat. sg. was restored (after the consonant stems). Or **-ōi* results from a contraction after the development **-ōi* > **-ō*.

/*-āu*/ is the loc. sg. ending of the *u*-stems; there is no indication that it ever lost its *-u*.

/*-ār*/ is found in ntr. pl. /*ayār*, *sahvār*/, but we have /*-ā*/ in nom. sg. /*dugdā*, *dātā*/. The loss of the *-r* is only IIr. In the neuters the *-r* must have been restored after the singular (/*ayar*, **sahvar*/).

/*-ān*/ is found in the ntr. pl. /*dāmām*, *rāmām*/ (with *-n* assimilated to preceding *m*), and in the loc. sg., /*cašmām*/, but *-ā* in the nom. sg. /*karpā*, *tašā*/. Again the *-n* must have been restored.

82. Final consonants
821. **-t*
821a. velar + **t*

For *yaogat̰* 3s aor. and *paityaogat̰* adv. (?) it has been assumed that *-gat̰* denotes *-k*; but there is nothing comparable in the Avestan writing system. In the verb one might expect **yauk-t* > **yauxt*. A *-t* was lost, and mostly restored, after *s*, so probably it was lost and restored here too. The *-t* was pronounced weakly (written *-t̰*), and so was the velar before it, the lenis *g* being used instead of the fortis *k*. So it was /*yaukt*/, phonetically [*yaugd*]. (A comparable situation is found in Dutch; *direkt* is pronounced either [*direk*] or [*diregət*].) The *-t* in the adverb (also L. *bərəzyaogat̰*, *ašiš.hāgat̰*, *ārmaitiš.hāgat̰*) is morphologically difficult (*-t* analogical after /*hakrt*/, Skt. *sakŕt*?).

821b. dental + *t > -st; see on *-st below.

  *-st, -št > -s, -š.

In many cases the -t has been restored. The situation is not quite clear. We have the following forms (all 3s):

/aʔas/ ind. imf. ah-   /tāšt/ inj. pres. taš-
/didans/ inj. pres. danh- 49.9b   /rураust/ inj. pres. rud-
/cinas/ inj. pres. ciš- 44.6d   /daidaišt/ inj. pres. intens. dis-
/cinas/ inj. pres. ciθ- 32.5c   /caišt/ root aor. ciš-
/vāns/ s-aor. van-   /maist/ root aor. miθ-
/sāns/ s-aor. sand-   /vaxšt/ root aor. uxš-
/xšnāuš/ s-aor. šnu-   dārəšt 43.13d
                                        dōrəšt 49.2c

It seems that in the s-aorist the -t was not restored. This is understandable as here the -t always stood after s, š, whereas in the imperfect or root aorist it came after s only with a few roots. This would mean that dōrəšt and dārəšt cannot be s-aorists (from dar-). dārəšt has also been derived from dṛš- 'to dare', as a root aorist, so /daršt/ (with long ā after the s- aorist?). In 49.2c dar- 'to hold' does not fit very well. It would be easy if in all other cases -t was restored, but we have /aʔas/, /didans/ and /cinas/. Perhaps the nasal presents were an exception, but it is not clear why. (cinas < *ci-n-aθ-t shows that dental + t > st also lost its -t.) /as/ may be an exception because of its frequency. (LAv. provides only one relevant form, nāist.) The problem is unsolved. (Perhaps the -t was restored later, but inconsistently.)

821c. *-rt is found in /cart/ 'he made'; the -t may have been restored; cf. section 821a.

821d. *-nt > -n

/dadan, dān/ 3p inj. pres., aor. of dā-.

/raiθvan/, pres. ptc. ntr.

/mizdavān/ Apn 'rewarded'; adj. in -vant-.

822. *s

-Vs: *-as, *-ās > -ah, -āh

-Cs: velar + s > -xš

    dental + s > -s

    -ans > -anh, see 49.

    -ins, -uns > -īš, -ūš, sec 45.

The Gathic forms in -xš are: /druxš, usixš, vāxš, ānušaxš/; in Sanskrit the -s was lost: drúk, usík, vā́k, ānuṣák.

    For -ts > -s compare /harvatāš/, /višpāhišəs/ < *-nts 'all observing'. Note also *-ants > -ans: pres. ptc. /prsans, jīvans/. The forms seem to have been restored, in view of LAv. -ō̄ < *-as < *-nts.

823. *-*H*. See on the laryngeals.

824. *-*r*, -*l*, -*m*, -*n* see above 81b under the diphthongs.
   *-*Cr* > -*Car* see 61b.
   *-*n* is assimilated to the *m* at the beginning of the syllable: loc. sg.
/cašmām/, ntr. pl. /dāmām/.

9. General processes

91. Assimilation

Stops and *s* became voiced before voiced stops, and voiceless before
voiceless stops. (But see 32d on Bartholomae's law.)
   Nasals become *n* before dental, velar and palatal, and *m* before labial.
/hankrta-/ with /ham-/.
   On *dn* see 35d.
   Assimilation at a distance is found in -*mVn* > -*mVm*; see 824.

92. Reduction of geminates

   In PIE -*ss*- was reduced to -*s*-; thus *$h_1$essi* > *$h_2$esi*, which became
/ahi/ in Gathic.
   Reduction of two sibilants to a single one:
/dušiti-/ 'distress' < *duš-šiti-*, cf. /hušiti-/ 'good dwelling'.
/dušrθri-/ 'having bad protection' < *duš-srθr-i-* (from *srθra-*, L. *harəθra-*).

93. Haplology

Beside /amrtatāt-/ we find the shortened form /amrtāt-/. Beside /harvatātah/
we find /harvatah/ (perhaps to be read /harvātah/), which is perhaps due
to influence of /amrt(at)āt-/, because the two forms often occur together.
Beside /harvatās/ also /harvās/ occurs.

COMPOUNDS

Compounds must be distinguished first according to their meaning. The meaning of compounds must be described in terms of the first member, the second member and the person or thing referred to, the referent. Essential is whether the referent is identical with the first member (1m), the second member (2m) or with neither of them. Thus we have the following types.

I Referent is identical with 1m

/djit-arta-/ 'destroying Arta'; the referent *is* 'destroying'. These compounds are traditionally called governing compounds, because the 1m governs the second, or put the other way round, because the 2m determines the 1m, whereas in the other types this is the other way round.

II Referent is identical with 2m

/daiva-zušta-/ 'liked by the daiva's; the referent *is* 'liked'. These forms are called determinatives. This term is not very clear, but is nevertheless retained here.

III Referent is identical with neither 1m nor 2m.

/ustāna-zasta-/ 'having/with outstretched hands'. Referent *is* neither 'outstretched' nor 'hand(s)', but he *has* outstretched hands. These are called bahuvrīhi's.

1. Governing compounds

11. 1m = verbal noun/stem

/djit-arta-/ 53.6d.9b 'destroying Arta'.

/frādat-gaiθa-/ 33.11b 'furthering life'.

/Haicat-aspa-/ 46.15a 'descendant of H.', litt. 'bathing horses'.

/janar-/ 53.8c 'men-killing', < *jan-nar-.

/manza-rayi-/ 43.12d 'granting wealth'.

?/Zaraθ-uštra-/ 28.6b etc. pers. name; '...-ing camels'?

12. 1m = preverb

/fra-divā/ 32.14b 'long since', Skt. *pradívah*, -*i*.

/pari-gaiθa-/ 34.2c 'around the creatures, the world; universal'.

2. Determinatives

21. 2m = verbal noun/adj.

They will be grouped according to their stem.

As first member we find: a substantive, an adjective, an indeclinable or a verb.

2m = root noun

Those in *-r*, *-i* and *-u* add a *-t-*.

bar-: /*vayu-br-t-*/ 'crying woe'; 'qui apporte avec le vent'? Kellens 1974, 137ff.

biš-: /*ahum-biš-*/ 'life-healing'.

dā-: /*zraz-daʔ-*/ 'believing', Skt. *śrad-dhā-*.

gan-: /*sar-gan-*/? 29.3a is quite uncertain;
　　　/*vrθram-gan-*/ 'who smashes the obstacle'.

jī-: /*rž-jiʔ-*/ 'living justly'.

vrt-: /*fra-vrt-*/ adv. 'continuously', Skt. *pra-vŕt*.

Suffix *-a-*

dviš-: /*a-dvaiša-*/ 'not hostile' (perhaps /*-dvaišah-*/).
　　　/*vi-dvaiša-*/ 'enemy'.

han-: /*hu-šana-*/ 'giving good gain'.

zuš-: /*ha-zaoša-*/ 'like minded', Skt. *sajóṣa-*.

Two superlatives are supposed to derive from *a*-stems:

bar-: /*abi-barišta-*/ 'best bringing food'.

dā-: /*zraz-dišta-*/ 'most believing' (from *-dH-a-*?).

Suffix *-ti-*

ar-: /*fra-ʔrti-*/ 'arising, coming up'.

cit-: /*hu-cisti-*/ 'good understanding'.

dā-: /*vi-dāti-*/ 'distribution'.

dā-: /*zraz-dāti-*/ 'belief'.

dis-: /*ā-dišti-*/ 'instruction'.

i-: /*an-iti-*/ (*ənəiti-*) 'lack of freedom of movement, no access';
　　　/*duš-iti-*/ 'misery, strife';
　　　/*hu-iti-*/ (*xᵛīti-*) 'easy access';
　　　/*vasah-iti*/ 'liberty'.

jiʔ-: /*hu-jīti-*/ 'good life';
　　　/*a-jyāti-*/ 'non-life';
　　　/*duž-jyāti-*/ 'painful life';
　　　/*hu-jyāti-*/ 'health';
　　　/*fra-jyāti-*/ 'possibility in life, future'.

kr-: /*ā-krti-*/ 'formation, existence';
　　　/*ranyas-krti-*/ 'bringing joy'.

man-: /*tarah-mati-*/ 'insolence';
　　　/*tušnā-mati-*/ 'silent thought'?, 'the meditative one'?

mr-: /*hu-mrti-*/ 'good remembrance' (?One would expect *hušmrti-*; so rather 'good death'?)

pat-: /*ava-pasti-*/ 'falling down'.

prs-: /ham-p(a)ršti-/ 'consulting, counsel'.

sac-: /ā-skti-/ 'communication, following'.

sas-: /duš-sasti-/ 'teacher of evil';
    /fra-sasti-/ 'fame'.

sru-: /a-srušti-/ 'disobedience'.

ši-: /hu-šiti-/ 'good dwelling'.

uc/vac-: /vrãxš-uxti-/ 'joyful crying'?, 'habit of pleasure'?

vid-: /a-visti-/ 'poverty, lack'.

zu-: /ā-zuti-/ 'libation of fat', Skt. *ā-huti-*.

Unclear is *paityāsti-*.

Suffix *-ta-*

dā-: /ni-dāta-/ 'laid down'.

drs-: /abi-dršta-/ 'visible'.

iš-: /fra-ʔišta-/ 'stimulated'.
    /zastā-ʔišta-/ 'what is set in motion by hand'?

kr-: /han-krta-/ 'made ready'
    /hu-krta-/ 'well made'.

mr-: /a-mrta(-tāt)-/ 'immortal(ity)'.

vrz-: /duž-v(a)ršta-/ 'evil deed';
    /hu-v(a)ršta-/ 'good action';
    /haθya-v(a)ršta-/ 'realization'.

zuš-: /daiva-zušta-/ 'liked by the daiva's'.

vid-: /manah-vista-/ 'what the mind is concentrated on'?

Suffix *-ah-*

auk-: /anaucah-/ 'inimical'. Or bahuvrīhi 'sharing no habits'? Insler; Skt.
    ókas-.

daʔ-: /yạuž-daʔah-/ 'making healthy';
    /duž-daʔah-/ 'acting wrongly, maleficent';
    /hu-daʔah-/ 'beneficent'.

vac-: /rš-vacah-/ 'true-speaking'.

zuʔ-: /duž-zuʔah-/ 'speaking evil'.

Other suffixes

-ana-: *xšnā-*: /fra-xšnana-/ 'discernment'? Uncertain.

-āni-: *caš-*: /varu-cašāni-/ 'farseeing'.
        mar-: /hāta-marāni-/ ?

-in-: *xšnā-*: /fra-xšnin-/ 'careful'.

-tar-: *daxš-*: /fra-daxštar-/ 'revealer'.
        ?*mid-*: /hamaistar-/ 'suppressor' or 'expeller'.

-θman-: *ši-*; /hu-šaiθman-/ 'good dwelling'.

Participle as 2m.

/a-drujyant-/ 'not deceitful'.

/vispā̆-hišat-/ 'all-observing'.
/árta-uxšayant-/ 'increasing Arta'.
/a-gžanvamna-/ 'imperishable'.

22. Determinatives with a substantive as 2m.

They will be grouped according to the first member: subst., adj., preverb/prep., (other) indeclinable.

Substantive as 1m.

/hizvā-uxθa-/ 47.2b, 51.3b 'word spoken with the tongue'. The first member cannot be a normal instrumental, which would be hizuʔā. It might be the stem. Or expected *hizū-uxθāiš (pronounced [-uu̯u-]?, written -uu(u)u-?) was no longer understood and changed after the post-Gathic instr. hizvā̆. In 51 the two members are separated by the caesura, so they were probably two words. Perhaps the instrumental had the form *-veh₂-h₁.

Adjective as first member

In most cases the manuscripts give two words.

/ahma-rāti-/ 29.11c 'our gift'.
/darga-jyāti-/ 33.5b, 43.2b 'long life'.
/hada-vasti-/ 46.17c 'total inspiration'? (root vat-).
/haθra-manah-/ 30.9c 'convinced'? Doubtful.
/maiθa-maya-/ 33.9b 'consisting of change'? Doubtful.
/mana-vista-/ 46.19d 'my possession'?
/θva-išti-/ 44.10e 'thy power(s)'?
/xšma-uxθa-/ 43.11c 'your word'.

Preverb as first member

/ava-hāna-/ 33.5a 'stop(ping)'; Skt. ava-sāná-.
?/ā-manaha-/ 49.6b 'intention'.
/ā-varna-/ 30.2b 'choice'.
/ānu-šak-/ 31.12c 'in due course'; Skt. ānuṣák 'in turn'.
/parā-ʔahu-/ 46.19c 'of future life'.

Adverb as first member

/an-afšman-/ 46.17b 'non-verse'.
/a-vāstriya-/ 31.10c 'non-pastor'.
/duš-hvarθa-/ 31.20b, 53.6c 'bad food'.
/hu-ʔahaviʔa-/ 53.1c 'good existence'.
/hu-nara-/ 43.5e 'ability, power'; Skt. sūnára-.
/hu-nartāt-/ 50.8d 'ability'.
/hau-zanθva-/ 45.9e 'good relationship'.
/aram-piθva-/ 44.5d '(after)noon', litt. '(time) fitting for the meal'
/rž-uxθa-/ 31.19b, 44.19c 'true word'.

23. Determinatives with an adjective as second member.
Substantive as first member
/árta-aujah-/ 43.4d 'strong through Arta'.

Adjective as first member (This type does not exist in Sanskrit.)
/vispa-mazišta-/ 33.5a 'greatest of all'.

Adverb as first member
/a-dāθa-/ 46.15b.17d 'unrighteous'.
/an-aiša-/ 29.9a, 46.2a 'powerless'.
/hu-manzdra-/ 30.1c 'very wise'.

3. Bahuvrīhi's
There are no bahuvrīhi's ending in an adjective in these texts. All forms
have a substantive as second member.
Substantive as first member
/huan-darsa-/ 43.16d 'sunlike'.
/Madyai-māha-/ 51.19a personal name. Lit. 'from the middle of the
month'; 'relatif au mois dans son milieu'.
/išā-xšaθri(?)a-/ 29.9b 'ruling with power'.
Adjective as first member
Verbal adjectives in -ta-, -na-
/dršta-ainah-/ 34.4c 'bringing visible destruction'.
/pŕta-tanu?-/ 53.9b 'whose body is forfeited'.
/Višta-?aspa-/ 28.7b etc. personal name; litt. 'having loosened? horses'.
/ustāna-zasta-/ 28.1a, 50.8b 'with outstretched hands'.
Other adjectives
/dargāyu-/ 28.6a 'lasting a long time'.
/kamna-fšva-/ 46.2b 'having few cattle'.
/kamnānar-/ 46.2b 'having few men'.
/miθah-vacah-/ 31.12a 'whose words are false'.
/yā-šyauθna-/ 31.16c 'with which actions'.
?/zaraθ-uštra-/ 28.6b etc. pers. name; 'with ... camels'?
Preverb as first member
?/pari-gaiθa-/ 34.2c 'universal', litt. 'around the creatures'?
Adverb as first member
/dušrθri-/ 49.1b 'having bad protection'.
/duš-xšaθra-/ 48.5a.10d, 49.11a 'ruling badly'.
/duš-šyauθna-/ 31.15b etc. 'of evil deeds'.
/duš-xratu-/ 49.4a 'of bad intention'.
/duž-dayana-/ 49.11b 'of evil thinking'.
/duž-manah-/ 49.11b 'of evil mind'.
/duž-vacah-/ 49.11a 'of evil words'.

/*duž-varna-*/ 53.9a 'choosing badly'.

/*hu-dānu-*/ 31.16a 'blessed'; Skt. *sudā́nu-*.

/*hu-šyauθna-*/ 45.4d 'doing good'.

/*hu-xratu-*/ 34.10a, 51.5b 'of good will'.

/*hu-xšaθra-*/ 44.20a etc. 'well-ruling'.

/*hu-zantu-*/ 43.3e etc. 'of good lineage'.

/*hu-ʔāpah-*/ 44.5b.c 'craftsman'.

/*hau-guva-*/ 46.16b etc. pers. name, litt. 'having good cattle'.

/*vasas-xšaθra-*/ 43.8d 'ruling at will'.

THE NOUN

1. Introduction

11. *Noun and adjective*

The inflection of the adjective is identical to that of the noun. For the formation of the gender see 33.

12. *Categories*

The Gāthā-Avestan noun has the following forms:
gender: masculine, feminine, neuter;
number: singular, dual, plural.

The cases do not always have separate forms. We find:

sg.	pl.	du.
nom.	pl. } n.v.	du. }
voc.		} n.v.a.
acc.	acc.	}
gen.	gen.	gen.
abl.	} a.d.	}
dat.		} a.d.i.
instr.	instr.	}
loc.	loc.	loc.

A separate form for the abl.sg. exists only for the *a*-stems. Avestan differs from Sanskrit in having a separate form for the gen.du.

A case may be indicated for short by the first letter of case—number—gender, the first one with a capital. Thus Nsm = nom.sg.m.

13. *The stem classes and ablaut patterns*

Nouns must be distinguished according to their stem-ending:
Root nouns (see there)
Derivative nouns in:

PIE laryngeal (*paθ-*, *maz-*)
-*s*; -*t*; -*n*, -*r*
-*i* and -*u*
-*ī* and -*ū*
-*ā* fem.
-*a* masc.
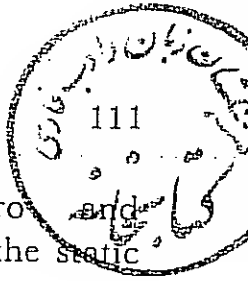
Two ablaut patterns must be distinguished: proterodynamic and hysterodynamic. There are only few traces of the third type, the static inflection.

The two types can be characterized as follows:

prot.		hyst.	
CeC-u-s		CeC-u-s, -$\bar{o}u$(-s)	
CeC-u-m		CC-eu-m	
CC-ou-s		CC-u-os	
CC-eu-(ei)		CC-u-ei	
CC-eu-(eh)		CC-u-eh	
CC-$\bar{e}u$		CC-eu(-i)	
CeC-eu-es		CeC-eu-es	
CeC-u-ns		CC-eu-ns	
CC-eu-om		CC-u-om	
CC-u-bhi		CC-u-bhi	

Essential is the form of the suffix. The proterodynamic type had zero grade in NAs, full grade in the rest of the singular. The hysterodynamic type had full grade in As, zero grade in the other oblique cases; the nominative had originally zero grade, later (but still in PIE) a lengthened grade (without -s). In the plural it seems that the nominatives were identical. In the hysterodynamic accusative the zero grade suffix was introduced in Indo-Iranian (though perhaps not in all instances).

The ablaut of the root has mostly been eliminated. Clear remains are:

prot.		hyst.			
h_2oi-u	/$\bar{a}yu$/	*$pont$-$\bar{e}h$(-s)	LAv. $pant\ddot{a}$	
h_2i-eu-s	/$yau\check{s}$/	*$pont$-eh_1-m	LAv. $pant\d{a}m$	
h_2i-eu-ei	/$yavai$/	*pnt-h_1-os	/$pa\theta ah$/	

The static inflection had the accent on the root throughout, and zero grade of suffix and ending. Thus:

nom. $C\acute{e}C$-r
acc. $C\acute{e}C$-r-m
gen. $C\acute{e}C$-r-s, etc.

14. *The endings*

Here only the general endings are given. Special forms are discussed in the relevant sections. Where the forms agree with the Sanskrit ones, no comment is given. Questions of ablaut are treated with the separate classes.

		Skt.	GAv.	written
sg. nom.		-s, -o	-s, -o	-s, -o
acc.	V	-m	-m	-m
	C	-am	-am	-$\breve{\partial}m$

gen.		-as	-ah	-ō, -ə̄
abl.		-s	-s	-s
dat.		-e	-ai	-ōi, -ē
instr.		-ā	-ā	-ā
loc.		-ø, -i	-ø, -i	-ø, -ī
voc.		-ø	-ø	-ø
pl. nom.		-as	-ah	-ə̄
acc.		-as	-ah	-ō
gen.		-ām	-aʔam	-ąm
dat.a.		-bhyas	-byah	-byō
instr.		-bhis	-biš	-bīš
loc.		-su	-su	-sū
du.n.a.v. m.f.	C-st.	-ā, -au	-ā	-ā
	i-st.	-ī	-ī	-ī
	u-st.	-ū	-ū	-ū
	ī-st.[1]	-ī	-ī	-ī
	ā-st.	-e	-ai	-ē
	a-st.	-ā, -au	-ā, āh?	-ā, -å?
ntr.	C-st.	-ī	*-ī	*-ī
	a-st.	-e	--	--
d.i.a.		-bhyām	-byā	-byā
gen.		⎱ -os	-ʔāh	-å
loc.		⎰	-au	-ō

Singular

In the endings as such there are no peculiarities. Details are discussed in the relevant sections.

Plural

Gen. On /-aʔam/ see IV 53.3.

Instr. The ending is always written with long *i*, but it does not seem probable that it was in fact long.

Dual

While the endings of singular and plural agree exactly with those of Sanskrit, the dual shows a number of differences.

Nom. -āh (written -ā̊) occurs only once (*varnāh 30.2b) and very rarely in LAv. It is therefore more likely that it is an error for -ā. In GAv. we find no ending which would correspond to Skt. -au < *āu. The neuter

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[1] Type *devī*

consonant-stem ending -ī can be inferred from ašibyā, which must have -i- from the nom.du.

Gen. The Avestan form -āh < *-ās can correspond with OP gaušāyā, ušiyā. Elsewhere there is nothing comparable. The ending must have had an initial laryngeal: /manyuʔāh, ahuʔāh/.

Dat.-instr.-abl. OP too has no nasal, -biyā, but LAv. brvat-byąm has one. The nasalization of Old Irish -b points to the original presence of a nasal there too. Perhaps the two forms existed side by side.

Loc. Av. /-au/, Skt. -os < *-aus.

2. The inflection

In the following sections the inflection of the different stem classes is given. All case forms found in the Gathas and the Yasna Haptanghaiti are illustrated.

With every stem class *all* words belonging to it are given. They are given in retrograde alphabetic order (according to the Latin alphabet). The meanings given are just meant to identify the word; they do not present a deliberate choice of the author (except for a few cases) but are those of Humbach or Insler. A few forms of which the interpretation is quite desperate are left out.

21. *Root nouns*

The following root nouns are found in Gathic.

	masc.	fem.	ntr.	adj.
k/c	vāc- voice			ānušac- standing after
				YH artahāc- companion of Ar(
				YH suc- shining
g/j	usij- priest	buj- expiation		
		druj- deceit		
t		šnut- satisfaction	YH ast bone	vayubrt- woeful
		stut- praise		
d	švid-milk	sprd- zeal	zrd- heart	frād- furthering
		vrd- increase		ʔvid- sharing
		išud- granting of power		
p		ap- water		
		kŕp- form		
s		YH nās- obtaining		
		vis- village		
z		varz- invigoration		
		drz- shackle		

š   *iš* strength   *aš-* eye   *ahumbiš-* world-healer
                          drš- outrage   *yauš-* life
                                                   āh- mouth

m   *dam-* house   *zam-* earth
      zyam- winter

n   *sarjan-* breaking protection
                                                   vrθramjan- victorious

r   *gar-* song
                          sar- union

aʔ   *ādaʔ* oblation   *cagdaʔ-* granting a gift
                                                   mazdaʔ- wise
                                                   zrazdaʔ- faithful
                                                   yauždaʔ giving life
                                                   YH *rāmadaʔ-* giving peace
                                                   YH *vyādaʔ-* repartition of goods
iʔ   *yavaijiʔ-* living forever
uʔ   *yavaisuʔ-* prospering forever
v   *gav-* cow

The inflection of the root nouns

	stops, spirants	-r, -n	-m	-h
Ns	*vāxš, druxš, drš-ca*[1]	*sarjā*		
A	*vācam, drujam, krpam*	*saram*	*zām*	
G	*frādah, drujah*	*sarah, garah*	*zimah, danh*	*āh-ah*
D		*sarai, garai*		
I	*sucā, sprdā, drzā*			*āh-ā*[2]
L	*varzi*	*sari* YH	*dām*	
V	*ahumbiš*			
Np	*išah*			
A	*apah, apas-ca*			
G	*krpaʔam* YH, *stutaʔam*			
D	*vižbyah*[3], *'vayubrdbyah*			
I	*azdbiš* YH	*garbiš*		
L	*nāšu*[4] YH			
D	*asĩbya*			

1. -*z* + *s* > *š* see IV 33b
2. written *āəåŋhā*
3. written *vižibyō*
4. -*s* + *s* > *š* see IV 33b

	-a?		-i? -u?		-u
N	*mazdāh, -ās-ca*		*ržjīš*		*gāuš*
A	*mazda?am*				*gām*
G	*mazda?ah, -as-ca, cagd-ah?*				*gauš*
D	*mazda?ai*		*ržji?ai*		*gavai*
I	*ād-a?-ā*				
L	*'ād-a?-i*[1]				
V	*mazdā, ādā*				
pl. N	*zrazda?-ah*				
A	*vyāda?-ah* YH		*yavaiji?ah, -su?ah*		*gāh* YH
L	*adāhu* YH				
du. N					*gāvā*

1) written *ādāi*, with unoriginal *-āi?*

Stems in stops and spirants. The du. dat. /*asībyā*/ must have its *-i-* from
the du. nom. **asī*.

Stems in *-m*. The As /*zām*/ has been created on the basis of Ns (LAv.
zå <) **zāh*. This word was originally a derivative (**dʰegʰ-ōm*, cf. Hitt.
tēkan), but when *dǵʰ-* had become *z-* (Skt. *kṣ-*), it looked like a root noun
and took *-s* in the Ns.

While /*danh*/ < **dan-s* is proterodynamic, /*zim-ah*/ from *zyam-* is
hysterodynamic.

Stems in *-a?*. For the laryngeals see IV 53.3. /*mazda?-, āda?-*/ have
-a?- generalized; zero grade is found in the infinitive, originally dative,
/*pai*/ < **pH-ai*, and in /*cagd-ah*/ if this really was a stem in *-a?*.

Stems in *-u*. /*gām*/, Skt. *gām*, Gr. *bōn* must be of PIE date, from **gʷōm*.
Gen. /*gauš*/ < **gʷH-ou-s*. The Ap /*gāh*/ was made after the As.

22. *Stems in a PIE laryngeal*

Stems with a suffix in a PIE laryngeal are continued by the *i?-*, *u?-* and
*a?-*stems. Two words that do no fall into these categories are given
here: *maz-* 'great' and *pa θ-* 'path' (LAv. forms in brackets).

	GAv.		Skt.		PIE
Ns	(*maza*)		*mahā́n*		*meǵ-h₂*
A	(*mazåntəm*)		*mahā́m*		*mǵ-eh₂-m*
G	*mazah*		*maháḥ*		*mǵ-h₂-ós*
D	*mazai*		*mahé*		*mǵ-h₂-éi*
Ip	*mazbiš*				*mǵ-h₂-bhi*

Ns	(pántå)	pánthāḥ	pont-(e̅)h₁
A	paθaʔam? (pantąm)	pánthām	pont-eh₁-m
G	paθah		pnt-h₁-ós
I	(paθa)	pathā́	pnt-h₁-éh₁
L	paθi		p(o)nt-eh₁(i)
Np	(pantānō)	pánthāḥ	pont-eh₁-es
A	paθah		pnt-eh₁-ns
G	paθaʔam? (paθąm)	pathā́m	pnt-h₁-om
I	padbiš	pathíbhiḥ	pnt-h₁-bhi

Both words are hysterodynamic. As in the oblique cases the laryngeal disappeared in Avestan (also before consonant, where Sanskrit has *i*), the words seem root nouns in these forms. GAv. has only such forms. /paθaʔam/ seems to be acc. sg., though gen. pl. is also considered. If so, GAv. generalized *paθ-*.

23. *s-stems*

Note that the words are given in retrograde alphabetic order and in phonemic transcription (see 2.).

Neuters

daʔah- gift
yaʔah- prayer
nabah- cloud
vacah- word
varcah- reputation
raucah- light
rādah- gracious disposition
vrādah- joy, bliss
cazdah-(vant-) (prudent)
augah- strength
θyajah- loneliness
namah- worship
tamah- darkness
manah- mind
rafnah- support
ainah- sin
draunah- sacrifice
raixnah- heritage
yasah-(ya- to give) prestige
rašah- damage
vaišah- decay
dvaišah- hatred

Adjectives

hudaʔah- benificent
duždaʔah- maleficent
miθahvacah- whose words are false
ršvacah- true-speaking
dužvacah- of evil words
anaucah- inimical
vazdah- inalterable
aujah- strong
ártaʔaujah- strong through Arta
dužmanah- of evil thinking
ahmarafnah- YH having support from us
dřštaʔainah- bringing visible destruction
ártacinah- YH loving Arta
hvarnah- majestic
dužvaršnah- of evil actions
huʔāpah- of good works
vasah- wishing
miθah-(vacah- whose words are) false
cagvah- giving help
gaudāyah- tending cattle
drigudāyah- YH caring for the poor
nādyah- weaker

ausah- destruction
θvaxšah- zeal
avah- help
sravah- word, teaching
savah- strength
zavah- strength
ayah- metal, iron
cayah- regard
hazah- power, violence
dbanzah- fullness
Words in -iš, -uš: neuters
rajiš- (ʔarj-?) darkness
narpiš- reduction
snaθiš- weapon
taviš- violence
Masculine and feminine:
maʔah- m. 'month

vrādyah- more joyful
vahyah- better
svanyah- holier
ašyah- worse
mazyah- larger
dužzuʔah- speaking evil
˙fravazah- YH moving

bāəduš- '?'
krduš- protection
hahuš- profit
āzuš- weakness?

ušah- f. dawn

The (perfect) participles in -vah- are given with the verb.

The inflection of the s-stems

	neuters		
NAs	manah, -as-ca	daʔah		narpiš, āzuš
G	manah-ah, -as-ca	daʔah-ah	
D	ainah-ai		
I	manah-ā		snaθišā
L	manah-i-ca	yaʔah-i	
NAp	manāh		
G	ainah-aʔam	yaʔah-aʔam YH	
I	raucah-biš		

	adjectives		comparatives
Ns	vasāh	hudaʔāh, n. gaudāyah	svanyāh, n. vahyah
A	drštaʔainah-am		nadyāh-am, n. vahyah
G	ártaʔaujah-ah		
D		hudaʔah-ai	
I	vazdah-ā?		
Np	dužv(a)ršnah-ah	hudaʔah-āh	
A	dužvacah-ah		
D		hudaʔah-byah	n. vahyāh
Nd	anaucah-ā		

	perf. participle	fem.	masc.
N	*vidvāh, viduš*	*ušāh*	*ma?ah*
G	*viduš-ah*		
D	*viduš-ai*		

The inflection is exactly parallel to that in Sanskrit. We have just two forms to see that in the acc. sg. the adjectives had the short form of the suffix, the comparatives the long grade.

NAp /manāh/ < *-ōs; Skt. *mánāṁsi* contains -*asi* < *-es-h_2 contaminated with -ās < *-ōs; cf. §25.

/raucahbiš/ is written *raocōbiš*, see II 14.8k.

The word for 'moon' has the old nom. sg. with zero grade of the suffix, *$mehₗn-s$ > /ma?ah/. (The acc. was originally *$mehₗ-n-es-m$, but here too the zero grade was introduced, Skt. *mā́sam*.)

/viduš/ probably retains the old nom. sg. of the hysterodynamic type.

24. *t-* and *nt-*stems

t-stems

masc.	fem.	adj.
napāt- grandson	*karpatāt-* karpan-hood	*carāt-* runner (?)
	amrt(at)āt- immortality	
	harv(at)-āt- health	
	parvatāt- eminence	
	avaitāt- lament, woe	
	hvaitāt- YH family-relationship	
	kavitāt- kavi-hood	
	astantāt- YH corporality	
	hunartāt- capacity, skill	

nt-stems

adjectives

hambavant- YH uniting themselves	*yušmāvant-* like you (pl.)
miždavant- rewarded	*θvāvant-* like you (sg.)
mavant- like me	*drugvant-* belonging to the drug
amavant- powerful	*raucahvant-* YH radiating light
vāstravant- having meadows	*cazdahvant-* responsible
zastavant- with the hand	*aujahvant-* strong
šmāvant- like you (pl.)	*namahvant-* adoring

ártivant- giving rewards	*sr̥nvant-* YH hearing
ršanvant- with horses	*arvant-* rapid
huʔanvant- sun-like	*dbišvant-* inimical
svanvant- bringing good fortune	*astvant-* bodily
cinvant- penitent	*bəzvant-* YH firm

The participles are given with the verb. (The substantivized /fšuyant-/ 'cattle-breeder', /saušyant-/ 'saviour' inflect like thematic participles.)

The inflection of the *t*-stems

t-stems

Ns	*amrt(at)ās-ca, avaitās*
A	*amrtatātam*
G	*amrtātas-ca*
I	*hunartātā*
L	*amrtāti*
Lp	*nafšu-ca*
Nd	*amrtātā*

nt-stems

	athem. partic.	them. partic.	adjectives	
Ns	*hans, davans*	*jīvans, iššans,* n. *yasahyan*	*drugvāh, θvāvans*	n. *astvat*
A	*yantam*	*fšuyantam*	*drugvantam*	n. *amavat*
G		*saušyantah, adrujyantah*	*drugvatah*	
D		*fšuyantai, hanantai*	*drugvatai*	
I			*drugvatā*	
L		*išanti*		
Np	*dantah*	*afšuyantah, marantah*	*drugvantah*	
A		*jīvantah, rapantah*	*drugvatah*	n. *m.iždavān*
G	*hataʔam*	*saušyantaʔam*	*drugvataʔam*	
D			*drugvadbyah*	
I			*drugvadbiš*	
L		*fšuyasu*	*drugvasu*	
Gd		*ártaʔauxšayantāh*		
	static			
N	*stavas, vispahišas*			

The thematic participles had -*ant*- throughout (except in the loc. pl.), whereas the athematic participles and the adjectives had ablaut -*ant-/-at*-.

The adjectives (all in -*vant*-) had nom. /-*vāh*/ < **vās*, with the exception of the comparative adjective, type *mavant*- 'like me'.

The nom. sg. in *-ans* is due to restoration of the sequence *-ts* > *-s*, which had be come *-s* > *-h*. (The old form is seen in LAv. *-ō* < **-ah*, with the original zero grade of the suffix of the hysterodynamic type, **-nts* > **-as* > **-ah*.)

The type /*stavas*/, from **steu-nt-s*, continues a static inflection with the accent on the root and zero grade of the suffix throughout. It is also found with the reduplicated present *-hišas* < **-si-sH-nt-s*.

25. *n-stems*

Masculines
manθra?an- poet
aryaman- companionship
karpan- hostile teacher
asan- stone
tašan- creator
uxšan- bull?
ru?an- soul
maǧavan- adherent of Zarathustra's society
advan- road

Neuters
dāman- place
nāman- name
rāman- rest
vardman- increase
cagman- YH gift
zaiman- state of waking
anman- spirit
dvanman- cloud
cašman- eye
(an)afšman- (non-)verse?
paθman- flight
hušaiθman- good dwelling
dbauman- delusion
šyauman- action, work
haxman- community
vrāzman- bliss, grace
usan- wish
īšan- ntr/adj.? impulse
sāhvan- doctrine
mazan- YH magnitude

Adjectives
namahan- reverent
barziman- YH high
īšan- ntr/adj.? powerful
martan- mortal
ártavan- truthful
ciciθvan- understanding
?svan- virtuous
īsvan- being lord of
fraxšnin- careful

The inflection of the *n*-stems

	-an-				-van-	-man-
Ns	*karpā́*	*ru?ā́*	*uxšā́*	*manθra?-ā́*	*advā́(h)*	*aryamā́*
A		*ru?ā́nam*			*advā́nam*	
G				*manθrā́-n-ah*		*aryam(a)nas-ca*
D				*manθrā́-n-ai*		*aryamnā́*
Np	*karpánah*	*ru?ā́nah*				
			uxšā́nah			
A	*asanah*	*rūnas-ca*			*maǧaunah*	
D					*maǧavabyah*	

1) Written *urvā*. The analysis is uncertain. Also /(?)r-van-/ has been proposed.

adjectives

	-an-	-van-	-man-
Ns	n. *svan*	*ártavā*	
A		*ártavanam*	
G	*martānah*?	*ártaunah*	
D		*ártaunai*	
Np	*martānah*		
A		*ártaunah*	
G		*ártaunaɂam*	*barzimanaɂam* YH
I		*ártavabyah*	

neuters

Ns	*anma*		*haxma* YH
G		*cašmanh*	*haxmanh*
D	*anmanai*		*haxmanai* YH
L	*anmani, usan*	*cašmani, cašmām*	
NAp	*nāmani* YH	*sāhvani*	
	nāmām YH	*anafšmām*	*haxmām* YH
		afšmāni	
G	*nāmanaɂam* YH		
D	*dvanmabyas*-ca		
I	**nāmabiš*¹ YH		

1. Written *nāmanīš*.

Masculines and adjectives

Some words kept short -*an*- in the strong cases, others had -*ān*-. This may represent *-*on*-, but there was a secondary extension of -*ān*- in Avestan, as is shown by /*uxšānah*/ as against Skt. *ukṣánaḥ*. It has been assumed that -*ā*- was even introduced into the weak cases, but the only evidence would be /*martānah*/ 30.6c. From *advā and /*uxšā*/ we have no weak cases.

The Ns /*advāh*/ (*advå̆*) is either a mistake, or due to analogy as with the adjectives in -*vant*-.

The Ap /*asanah*/ has -*an*-. This may be the old hysterodynamic form of the acc. pl.

/*manθra-ɂā*/ has gen. sg. /*manθrānah*/ from *manθra-ɂn-ah.

/*fraxšnī*/ is nom. sg. masc. or neuter. If it is an *n*-stem (Skt. *pra-jñ-in*-), it will have -*in* < -*Hn*.

Neuters

The gen. sg. always has proterodynamic -*anh* < *-*an-s*. This form had disappeared in Sanskrit.

The loc. sg. has three forms, *-an* and *-ani*, and *-ān* (**-mān* was assimilated to *-mām*). The last form is the proterodynamic one, which originally belonged to the neuter, but the more frequent form of the other type also came to be used.

In the nom. pl. the normal form is *-ān* (**-mān* became *-mām*). We have *-ani* twice and *-āni* once. LAv. has *baēvani* and *cinmāni*. *-ān* continues PIE *-ōn*, *-ani -on-h₂*; *-āni* is a contamination.

The form /svan/ Nsn is unclear.

26. *r-* (and *r/n-*)*stems*

Masculines
nar- man
ātar- fire
dātar- giver
brātar- brother
θrātar- protector
abijartar- YH welcomer
ptar- father
star- star
sāstar- ruler
Feminines
dugdar- daughter
mātar- YH mother
Neuters
vadar weapon
audar cold
vazdvar mastership
sahvar teaching
huʔar sun
ayar day
azan- day
rāzar pronouncement
Adjectives
kamnānar- having few men
janar- men-killing
xrūnar- men-violating

vāstar- shepherd
patyāstar- reopener YH
hamaistar- suppressor
nainaistar- YH not despiser
θvrštar- creator
fradaxštar- teacher
stautar- singer of praises
zautar- priest
marxtar- destroyer

The inflection of the *r*- and
r/n-stems

Masc.-fem.

Ns	*dātā*	*ptā*	*nā*	*ātarš* YH	
A	*dātāram*	*ptaram*	*naram*	*ātrm*	
G			*nrš* ·	*āθrah*	
D		*piθrai, fθrai*	*narai*	*āθrai*	
I				*āθrā*	
V				*ātar* YH	
Np	*marxtārah*		*narah*		
A		*mātrnš-ca* YH	*nrnš*		
G		*dugdraɔam*	*janrām,*[1] *straɔam-ca*[2]		
V		*mātarah* YH			

Neuters

NS	*rāzar*	*huɔar*	*ayar*	*vazdvar*	
G	*rāzanh*	*huɔanh*	··········		*audrš-ca*
Np			*ayār*	*sahvār*	
G	*rāšnaɔam*				

1. Written *jānərạm*. Cf. ch. I on 53.8c.
2. Written *strām-cā*

The inflection of /*dātā*/, with long grade in the strong forms, is the general one, as in Sanskrit.

The type *ptar-* (*brātar-*, *mātar-*, *nar-*) has *-ar-* < **-er-* in the strong cases. On the inflection of *ptar-* see IV 52.2.

The gen. sg. /*nrš*/ agrees with Skt. *pituḥ* < **-trs*. The ending originated in a static paradigm, e.g. *méh₂-tr-s.

Acc. pl. /*mātrnš, nrnš*/ have vocalic *r*. It is written *-ərạš*, *ạ* probably indicating nasalized *ə*: *-ərə̃š* = *-ərənš* = *ṛnš*. LAv. writes *-ərəuš*. *-ṛns* is a static ending. LAv. *fəδrō* contains **-rṇs*, which points to PIE **-er-ns*.

It is supposed that /*ātarš*/ m. originally was a neuter. The acc. /*ātrm*/ has *-m* added to original (neuter) *ātr. This addition must have occurred before the development *-ṛ* > *-ar*. This development is found in the voc. /*ātar*/. Therefore the nom. sg. must have been *ātrš. The form *ātarš* shows the later development *ṛš* > *arš*. One might consider a static inflection **HéH-tr(s)*, *-tr-m*.

/*huɔar, huɔanh*/ are from *suH-r, *suH-en-s.

Plural /*ayār, sahvār*/ are the only forms in *-ār* in Indo-Iranian.

One neuter, /*audar*/, has an *r*-stem in an oblique form, gen. /*audrš*/.

The form has not been explained. An innovation is difficult to under-
stand, as there was no model. (LAv. has gen. sg. *ātarš* < **ātrš*; that this
form is recent is shown by abl. *āθrat̰*, as this form is always derived from
the genitive; cf. *nərat̰*, gen. *nərəš*.) One might consider static inflection,
gen. **Heloud-r-s*.

27. *i- and u-stems*

i-stems

Masculines
frādi- growth
āri- harm (?)
rši- seer
sti- m/f? possession?
asti- guest
duššasti- false prophet
asišti-? he who orders?
d(a)ršti- m/f? sight
axti- YH disaster

Feminines
grzdi- favour
dāmi- creation
jani- woman
maini- requital
mānari- murder?; adj.?
āθri- danger
aramati- piety
tušnāmati-? silent thought?
tarahmati- insolence
parimati- pride
vrati- vow
vidāti- distribution
zrazdāti- faith
rāti- gift
ahmarāti- our gift
ajyāti- non-life
dargajyāti- long life
frajyāti- future
hujyāti- happiness
dužjyāti- illness
vasahiti- prosperity

Adjectives
dāmi- creative
varucašāni- farseeing
mānari- pious?; f.?
?*dušrθri-* badly kept
caxri- turning into
būri- plentiful
Zaraθuštri- (descending) from Z.
visvapati- YH having drink for all
rānyaskrti- bringing joy
utayŭti- enduring; f.?

jīti- YH life
hujīti- good life
aniti- bad condition
dušiti- distress
hušiti- comfort
huʔiti- easy access
āskti- connection
árti- lot, part
fraʔrti- coming up
fravárti- YH confession of faith
ākrti- provision
humrti- good attention?
sti- m/f? possession?
avapasti- falling down
frasasti- fame
āsti- height
patyāsti- foundation (-*tiʔā-?*)
cisti- thought
hucisti- good thought
avisti- lack of
frašti- YH completion
išti- will
θvāʔišti- thy power
ādišti- instruction
d(a)ršti- m/f? sight
hamp(a)ršti- talk
ušti- wish
yaušti- YH sanctification
būšti- prosperity
asrušti- disobedience
utayŭti- freshness; adj.?
zūti- call
āzuti- fat(ness)
vrāxšuxti- pleasure
āθi- danger

Hysterodynamic are the following words:

Masculines	Adjectives
pati- lord	*hušaxi-* friendly
kavi- priest	*manzaraʔi-* granting wealth
raʔi- riches	
ʔuzūθi- help	

u-stems

Masculines	Feminines	Adjectives
vafu- secret word	*dahyu-* land	*drigu-* poor
ahu- life	*prtu-* m/f passage	*vahu-* good
sanhu- doctrine passage		*paru-* much, many
hunu- son		*airu-* wild?
pasu- cattle		*kasu-* small
ratu- judge		*āsu-* quick
xratu- plan		*hudānu-* blessed
gātu- way		*zaišnu-* shaking
jyātu- life		*hvaitu-* from the family
mantu- advice, -ser		*huzantu-* of good lineage
prtu- m/f passage		*prθu-* broad
hiθu-? companion		*dargāyu-* lasting a long time
pāyu- protector		*yazu-* young
manyu- spirit		*adyu-* YH not injuring
		rzu- straight

Neuter

āyu- time of life

Hysterodynamic

ahu- lord

hiθu-? companion

dargabāzu- with far-reaching arıns

The inflection of the *i-* and *u-*stems

	proterodyn.	hysterodyn.	proterodyn.	hysterodyn.
Ns	*ištiš*	*hušaxā, kavā, patiš*	*xratuš*, n. *āyu*	*dargabāzāuš* YH, *ahu*
A	*ištim*	*hušaxāyam*	*xratum* n. *vahu*	
G	*ištaiš*	*rāyah, (pataiš)*	*xratauš* *yauš*	
D	*axtayai*[1] YH	*paθyai-ca*[2]	*hvaitavai* *yavai*	
I	*cistī*		*xratū* *yavā*	*xraθvā*
L	*ištā*		*xratāu* *vahāu*	
			prtau	
V	*aramatai*			*vahu*
Np	*rātayah*	*kavayas-ca*[3]	*xratavah*	
A	*ištīš*		*xratūš* *vahū*	
G			*dahyunaʔam*	
D			*parubyah*	
L			*parušu*	
V	*jītayah*			

Nd	*aniti*		*manyū*
G			*manyuʔāh, ahuʔāh*
D			*ahubyā* YH
L			*ahuʔau* YH

1: Written *axtōyōi*.
2: Perhaps /*uzūθyai*/ •
3: Written *kāvayoscā*

The normal paradigm is the proterodynamic one. The forms agree with those of Sanskrit. There are only few traces of the hysterodynamic type.

i-stems

/*hušaxāyam*/ has long grade, just as Skt. *sákhāyam*.

u-stems

The loc. sg. is not quite clear. The form in /-*āu*/ is parallel to the Sanskrit one. Sanskrit has also -*avi*, which is not found in Avestan. LAv. has -*ava* = -*au* + the particle *a* (like OP -*avā*). Forms in (written) -*o* are also found, possibly continuing *-*au*. In Gathic we find *xratā̆* and *parətā̆*, -*ō*. It could be that the latter is a mistake for -*ā̆* (influence of surrounding *kavīnō* and *zəmō*). -*ā̆* probably represents /-*āu*/.

The gen. du. /*manyu-ʔāh, ahu-ʔāh*/ testifies to an ending IIr. *-*Hās*.

If /*ahu*/ is a nom. sg., it may be an *s*-less hysterodynamic nominative. Others take it as an instr. sg. The form *hiθāuš* 48.7c has been taken as a hysterodynamic nom. sg., or corrected into /*hiθauš*/, as a gen. sg.

28. *iʔ-, uʔ-stems*
iʔ-stems
proterodynamic

fem.	adjectives
būmiʔ- earth	*vahyahiʔ-*[1] YH better
kaniʔ- girl	*ahurāniʔ*- divine
nāriʔ- YH woman	*artauniʔ*- truthful
manauθriʔ- admonisher	*hatiʔ*- being
tavišiʔ- strength	*vāstravatiʔ*- having meadows
	aršanvatiʔ[2]- with horses
	šyatiʔ- dwelling (ptc. *ši*-)
	maikantiʔ- YH glittering
	hambavantiʔ- YH uniting oneself
	vahviʔ- good
	yazviʔ- young
	aziʔ- in milk

hysterodynamic
masc. *raθi?*- charioteer

u?-stems
proterodynamic: none
hysterodynamic

masc.	fem.	adj.
hizu?- tongue	*tanu?*- body	*p̊tatanu?*- whose body is condemned
	fsratu?- fullness?	

1) Written *vahehī*
2) Written *aršnavant*-

	i?-stems proterodynamic		hysterodyn.	*u?*-stems hysterodynamic			
Ns	*vahvī*					*fsratuš*	
A	*vahvīm*	*azīm*	*raθi?am*	*tanu?am*			
G	*vahviāh*	*azyāh*		*tanu?ah*	*hizu?ah*	*fsratu?ah* YH	
D	*vahviāi*			*tanu?ai*			
I	*vahviā*				*hizu?ā*		
V	*yazvī*						
Np	*manauθrīš*			*p̊tatanu?ah*			
A	*aršanvatīš*	*azīš* YH					
G	*năr̆ina?am* YH						
D	*šyatībyah*						
I					*hizūbiš*		
L				**tanušu-ca*			*
Nd	*tavišī*	*azī*					

i?-stems
The proterodynamic type is that of Skt. *devī́*, the hysterodynamic one that of *vr̥kī́ḥ*.

/vahviāh/ etc. has -*i*- for *y* according to Sievers' law.
u?-stems
On these forms see IV 53.3 (also on an acc. /tanum/). YH *fsəratvō* must have -*tu(v)ō*, or else the -*t*- would have become a fricative.

A form *tanuši-cā* 43.7e has been taken as a mistake for loc. pl. -*šu*.

29. *ā*-stems

grbā- understanding	*vananā*- victory
vi?-ā- wrapping; attention?	*dayanā*- vision
sardanā-·adversaries	*vyānā*- competence
manā- YH thinking	*gnā*- woman

kainā- punishment

sinā- destruction

sāsnā- teaching

šapā- night

aspā- mare

urvarā- plant

frasā- question

vīdvaišā-[1] enmity

jījišā- YH desire to win

sprzatā- eagerness

rātā- gift

haθyavršṭā- realization

gaiθā- herd

maiθā- change

dvaiθā- threat

hiθā- partner

ahvā- life

arampiθvā- afternoon

aganyā- YH cow

māyā- supernatural power

vrāzā- joy, bliss

ižā- offering of milk

The inflection of the ā-stems

Ns	dayanā	
A	dayanām	
G	dayanayāh	
D	dayanayāi	
I	dayanā	ižā
	dayanayā	sāsnayā urvāzyā YH
L		vyānayǎ?
V		brxθai
		svantā
Np	dayanāh	
A	dayanāh	sāsnāh, -ās-
G		sāsnanaꝑam
D	dayanābyah YH	vazyamnābyah
I	dayanābiš	gaiθāhu
Nd		ubai

On the development of the laryngeal see IV 53.3.

The gen., dat., instr., loc. sg. have -ay- while OP has -āy- and Sanskrit -āy- but -ay- in the instr. The last form is of pronominal origin, -āy- is not well explained. Avestan may have generalized -ay-, unless it is only graphic for /āy/; cf. on the gen. pl. YH has -y- instead of -āy-, clearly from the iꝑ-stems. It is remarkable that the two forms in the YH have -y-, while Gathic has only -āy- (manyā, urvāzyā).

The loc. sg. /-ayā̆/ could be *-aH-i + the particle -a (as in LAv. -ava of the u-stems).

The voc. sg. has beside /-ai/ (only /brxθai/ 48.6b) a form in -ā, /svantā/ 33.13c.

---

1) mostly corrected into /vidvaiša-/ 'enemy'.

The gen. pl. has /-ana?am/, where the first short -a- may be graphic for ā.

210. *a-stems*

Personal names have been included, pronominal adjectives have not. Words in -(*i*)*ya* are mostly of uncertain interpretation: they can have the suffix /-*i?a*/ or have vocalic -*i*- according to Sievers' law. In the latter case the phonemic interpretation is /-*ia*-/, as the -*y*- (of -*iya*-) is automatic. Therefore we shall write /-*i(?)a*-/ when we cannot decide between the two forms.

Masculines
mada- intoxicating drink
spāda- army
rāda- caretaker
vaida- acquirer, -isition
skanda- destruction
myazda- offering
maga- gift
Madyaimāha- Pn
sanha- teaching
sardi(?)a-/-dya-? fighter
fšanhi(?)a- cultivator
vaipi(?)a- PN? adj.?
napti(?)a- descendant
marti(?)a- mortal
marka- death
datika- YH wild animal
pasuka- YH domestic animal
rama- violence
Spităma- PN
yama- twin
kāma- desire
rāma- cruelty
hadma- m/n? seat
grahma- PN?
vahma- glorification
dasma- veneration
aišma- cruelty
hacana- m/n? companion
Fri?ana- PN
uštăna- life

rāna- thigh
yāna- entreaty?
hvafna- sleep
vadamna- bridegroom
varna- choice
vasna- will
yasna- worship
bŭna- ground?
Djāma?aspa- PN
Višta?aspa- PN
Haicataspa- PN
hunara- ability
javara- furtherer
zara- grace
duxšara- ?
važdra- driver
vīra- man
uštra- camel
Zaraθuštra- PN
Fraša?uštra- PN
dăθra- bestower
miθra- contract
manθra- mantra
puθra- son
ahura- lord
frasa- question
ansa- part
vraisa- turning-point
darsa- seeing
dvafša- distress
tkaiša- false prophet; deceit

gauša- ear
srauša- obedience
zauša- pleasure
vaʔata- wind
vanta- praise
marta- mortal
zasta- hand
ansta- evil
stauta- song
dūta- messenger

kāθa- requital
Haugua- PN
sava- m/n? salvation
zava- call
Bandva- PN
daiva- daiva
gaya- life
jaya- victory
xšaya- ruler
vāza- draught animal

Neuters
pada- foot
mižda- wages
baga- share
bāga- share
āmanaha- intention?
havapaha-? YH creative power
huʔahaviʔa- full lifetime
mrždika- mercy
hadma- m/n? seat
garma- heat
hacana- m/n? companionship
vaidana- possession
sanhana- teaching
mana- instruction?
fra(x)šnana- care
āpana- profit
vrzana- community
ādāna- portion
avahāna- stopping
dmāna- house
dyumna- glory
hākurna- association
šyauθna- work
vāra- will
sādra- injury; adj.?
vāstra- meadow
xrafstra- monster
sanstra- teaching
xšaθra- rule

svayaθra- atonement (sp-?)
vyaθra- protection
dāθra- gift
huʔāθra- happiness
rafθra- support
šaiθra- dwelling-place
ciθra- seed
darθra- maintenance
carkrθra- hymn of praise
vaxθra- speech
mūθra- urine
humata- YH good thought
vrata- order
dāta- law
āyapta- riches
árta- arta
p(a)ršta- question
huv(a)ršta- good actions
daxšta- sign
rixta- remainder
frādaθa- increase
haptaθa- seventh
mazdāθa- what should be considered
parigaiθa- transmitting herds
āhaiθa- capturing
viciθa- judgment
zanθa- birth
arθa- effort
hvarθa- food
dušhvarθa- bad food

prθa- atonement?

uxθa- word

šmaꝑuxθa- your word

ržuxθa- true word

sava- m/n? salvation

ărzava- good action

hauzanθva- good relation

kamnafšva- small herds

xrŭnya- violation

hvapaθya- authority

Adjectives

uba- both

suca- light

asanda- pernicious?

patisanda- YH welcome

vrzda- complete

darga- long

manahiꝑa- spiritual

zahiꝑa- risible

staumi(ꝑ)a- praising

vrzaniꝑa- of the community

yasni(ꝑ)a- of the worship

dafšni(ꝑ)a- powerless

vaipi(ꝑ)a- roguish? m?

variꝑa- desirable

friꝑa- friendly

vāstri(ꝑ)a- agricultural

išāxšaθri(ꝑ)a- powerful

išiꝑa- strong

āvišiꝑa- manifest

vanti(ꝑ)a- praising

zavištia- fastest

huꝑarθi(ꝑ)a- of good aim

zaviꝑa- to be called

jīvi(ꝑ)a- alive

parvia- first

aka- bad

ahmāka- our

šmāka- your pl.

yušmāka- your pl.

hama- same

apama- last

frašatama- most shining

svantatama- holiest

parutama- very many

hudma- sweet

dahma- pious?

rāθma- belonging to

taxma- brave

uzma- efficient

fra(x)šnana- careful

barana- bringing

hušana- giving profit

duždayana- of bad thinking

apāna- attained?

Haicataspāna- of H.

dvitāna- hateful

ustāna- stretched out

hvaina- glowing

kavina- of the kavi's

agžanvamna- undiminishing

dužvarna- choosing badly

asna- near

yāšyauθna- with what actions

duššyauθna- of evil deeds

hušyauθna- of good deeds

aruna- wild

asuna- swollen

apara- next

katăra- which of two

mazdāvara- chosen by AM.

hăra- guarding

ādra- humble

sādra- harmful; n.?

ardra- salutary

humanzdra- careful

abifra- incomparable?

ugra- strong

ahra- wicked

dahra- wise

vicira- discerning

srīra- YH beautiful

θvisra- shining

manzāxšaθra- granting power
vasasxšaθra- ruling at will
dušxšaθra- ruling badly
huxšaθra- ruling well
hušnāθra- with good bathing
ciθra- bright
dūra- far
xrūra- cruel
asūra- weak
Tūra- PN
suxra- bright
gūzra- hidden
aišasa- wild
huꝀandarsa- sunlike
fraša- shining; healed?
aiša- powerful
anaiša-powerless
advaiša- non-hostile
raꝀrša- estranged
dūrauša- ?
hazauša- like minded
Vivahuša- of V.
ruša- needy?
darsata- visible
yazata- YH venerable
nidāta-laid down
šyāta- happy
kudazāta- YH wherever born
hvaꝀita- easy to travel
svanta- holy
djítarta- violating A.
hukrta- well made
amŕta- immortal
ustānazasta- with outstretched
   hands
vista- found
manavista- ?
ahamusta- repulsive
xšusta- molten
ašta- arrived at?
fraꝀišta- stimulated
sraꝀišta- YH most glorious

zastāꝀišta- set in motion by the
   hand
acišta- worst
vahišta- best
aujišta- strongest
vaidišta- knowing best
nazdišta- nearest
zrazdišta- most believing
xrauždišta- hardest
svaništa- holiest
abibarišta- bringing good luck best
marišta- remembering best
āsišta- fastest
savišta- strongest
mazišta- largest
vispa ,, ,, of all
razišta- rightest
vrāzišta- giving greatest bliss
vāzišta- ?
barzišta- YH highest
dužv(a)ršta- of evil deeds
abidršta- visible
ušta- (diff. interpr.)
daivazušta- liked by the daivas
vraθa- friendly
dāθa- just
adāθa- unrighteous
hvagžāθa- YH rushing forth of their
   own
frādatgaiθa- furthering herds
maiθa- false
brxθa- honoured
aiva- one
jīva- alive
visva- all
ršva- high
rθva-worthy
tāya- secret
haiθahya- offering connection
miθahya- false
aujya- praiseworthy
anya- other

āhurya- YH divine
ršya- inspired
haθya- true
hvaθya- personally
īžya- YH full of strength

The inflection of the *a*-stems

Ns	*sanhah*	*yamas-*		*ártam*
A		*ahuram, gayam*	*šyauθnam*	*ártam*
G	*sanhahya*	*gayahya*		
Ab		*zaušāt, virāt-ca*	*šyauθnāt*	*ártāt*
D		*ahurāi,*	*šyauθnāi*	*ártāi*
		ahurāya		*ártāya-ca*
I	*sanhā*		*šyauθnā*	*ártā*
L	*sanhai*	*markai-ca*	*šyauθnai*	
		huʔāθrayā		
V		*ahura*		*árta*
Np	*sanhā,*		*šyauθnā*	
	sanhāhah			
A		*astanh, astans-ca*	*šyauθnā*	
G		*pasukanaʔam* YH	*šyauθnaʔam*	
D		*martaibyah, dātaibyas-ca*		
I	*sanhāiš*		*šyauθnāiš*	
L		*martaišu*	*šyauθnaišu*	
V		*visvā*		
		spitamāhah		
Nd		*yamā, vāzā*		
G		*rānayāh*		
DIA		*zastaibyā*		
L		*zastayau*		

Dat. sg. /-āi/ is the normal form, but there are some instances of /-āya/ (/ahurāya/ 29.5a, /magāya/ 29.11b, /hvarθāya/ 34.11a, /frādaθāya/ 45.9d, /vahmāya/ 46.10d, 53.2b, /vispāya/ 53.1c, 4d). These forms are written -āi.ā because scholars only knew the dat. in -āi. *Ašā yecā* must be read /ártāya-ca/ (30,1c, 51,2a). It has further been assumed in 31,16b /frādaθāya/ and 51.4a /mrždikāya/.

Nom. pl. The ending -ā is supposed to be the neuter pl. ending -ā, as a collective.

Nom. du. (ā) *varanå* 30.2b may be a mistake for -ā.

3. The Adjective

31. *Introduction*

As adjectives we find: 1. simple adjectives; 2. compounds; 3. participles and verbal nouns. The compounds were discussed in ch. V. There are ± 70 compound adjectives. This number may be high because of the character of the texts. The participles are given in X 15.1. Here we discuss the simple adjectives only.

32. *Inflection* The flexion of the adjectives is identical with that of the nouns with the same stem, which was given above.

33. *Stem-formation* The stem-formation will not be treated in detail. All adjectives have been given in the lists of the separate stems of the noun. The adjectives have the following stems; the formation of the neuter and the feminine is indicated. Also the number of occurrences is given. (These numbers—of the Gathas proper—are approximate because of uncertainties. Not included are: comparatives and superlatives; demonstratives, possessives and pronominal adjectives; ordinals.)

masc.		neuter		feminine	
-a	170	-a	45	-ā	24; -iʔ 1
-u	19	-u	1 + 130	-viʔ	13
-i	4	-i	1		
-nt	20	-nt	10	-atiʔ	5
-n	35			-niʔ	1
-h	2	-h	1		
-C	7				

a-stems. Three adjectives occur more than 20 times each: /parvia-, svanta-, visva-/. Of the neuter all forms except 10 are nom.-acc. sg. pl. The feminine in -iʔ is /Spitamiʔ/ 'of the Spitama-family'.

u-stems. Neuter is gen. sg./kasauš/ and 130 forms of /vahu-/ (the high number being due to *Vahu Manah*). Feminine are /vahviʔ/ and /yazviʔ-/.

n-stems. 28 forms are from /artavan-/. Feminine is /artauniʔ-/.

s-stems are /aujah-, vasah-/; ntr. /baduš/?

Consonant-stems are /cagdaʔ-, frād-, maz-/ (on which see 22), /vid-/. Unclear is /syas-/ 32.16a.

34. *Comparison* The comparative suffix -tara- is not found. Of the superlative suffix -tama- there are only three instances. It is added to the stem.

The comparative in -yah- is well represented. (It never has the form -iah-, which was generalized in Sanskrit.) The suffix -išta- is frequent.

These suffixes were added to the root in the full grade (but *-daH-* had the form *-dH-*). Note **ḱuH-ró-*, **ḱéuH-is-*; **ḱriH-ró-*, *ḱreiH-is-*. For the flexion of *-yah-* see 23.

All forms occurring are:

aka- bad	*aš-yah-*	*ac-išta-*
ašaujah- very strong		*auj-išta-*
āsu- quick		*ās-išta-*
mar- to remember		*mar-išta-*
maz- big	*maz-yah-*	*maz-išta-*
**asna-* near[1])		*nazd-išta-*
ādra-[2])	*nād-yah-* weaker	
rzu-		*raz-išta-*
L. *sūra-* strong		*sav-išta-*
svanta- holy	*svan-yah-*	*svan-išta-*
vahu- good	*vah-yah-*	*vah-išta-*
vid- knowing		*vaid-išta-*
L. *urvād-* to become happy	*vrād-yah-*	
vrāz- to be glad		*vrāz-išta-*
L. *xruždra-* hard		*xraužd-išta-*
zrazdaʔ- believing		*zrazd-išta-*
L. *bərəzant-* high		YH *barz-išta-*
L. *srīra-* beautiful		YH *sraʔ-išta-*
bar- to bring		comp. *abi-bar-išta-*

With *-tama-*:

fraša- shining	*fraša-tama-*
paru- much	*paru-tama-*
svanta- holy	*svanta-tama-*

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[1]) In the adverb /asnāt/. *asna-* from **nsd-no-*.
[2]) From **nh₃ dhró-*

THE PRONOUN

1. *Personal pronouns*

The first and second persons

	'I'	encl.	'you'	encl.
N	azam		tuʔam²	
	az, as-		tū	
A		mǎ	θvaʔam	θvǎ
G	mana¹		tava	tai
A	mat		θvat	
D	mabya(h)	mai	tabya(h)	tai
I			θvā YH	

	'we'	encl.	'you'	encl.
N	vayam³		yūžam, yūš	
A	ahma	nāh		vāh
G		nah		vah
Ab	ahmat		šmat, yušmat	
D	ahmabya	nah	šmabya, yušmabya	vah
I			šmā	

1) wr. *mǎ.nā*   2) wr. *tvǎm*   3) wr. *vaēm*

'I' /az, as-/ are the forms without -am, but there is some doubt about their interpretation. /mabyah/ may have -ah from the plural ending. -by(a) is taken from 'you'; Skt. *mahya* is the older form.

 'you'. /ta-bya/ is older than Skt. -bhyam.

 'we'. /ahma/ is older than Skt. *asmǎn*, cf. Gr. *amme* < *nsme. /nāh/ is not found in Sanskrit.

 'you'. The oblique stem /šma-/ originated from *ušma- (see IV 631a). It is more frequent (21 ×) than *yušma-* (6 ×). Sanskrit and LAv. (but here it is very rare) have only *yušma-*, later Iranian only *šma-*. The distribution in Gathic gives no clue, except that *šma-* is the usual form (once found in Y 53; YH has neither form).

The third person
For the third person demonstratives are used.

The reflexive pronoun
No form is found in Gathic. LAv. has *xᵛa-*.

2. *Possessive pronouns*

The possessive pronouns are:

ma-	ahmāka-, na-? (45.2c)
θva-	šmāka-, yušmāka-
hva-	hva- (?)

Whereas the forms in -āka- are inflected adjectives in Gathic, LAv. only has the forms in -ākəm, used as genitive of the personal pronouns.

Sanskrit does not have an equivalent of ma- (it has mắmaka-), from tva- it has only one form (tvắbhis; and from tāvaka- only tāvakébhyas). Skt. asmāka- and yušmāka- are parallel to the Av. forms. Av. /na-/ has no parallel, /ma-, θva-/ must be old, cf. Gr. (e)mós, sós.

These pronouns have the pronominal inflection:

	masc.	fem.	masc.	ntr.	fem.	masc.	fem.
Ns	mah		θvah		θvai	hvah	hvai
A							
G	mahya	mahyāh	θvahya		θvahyāh		hvahyāh
Ab			θvahmāt				
D	mahmāi		θvahmāi				hvahyāi
I	mā		θvā				
L	mahmi		θvahmi				
Np			θvai	θvā			
I						hvāiš	
L					θvāhu		

	masc.	ntr.	masc.	fem.
Np				
A			(yu)šmākam	šmākām
G			(yu)šmākahya	
D			(yu)šmākāi	
I			šmākā	
Np		nā		
A	ahmākanh			
I	ahmākāiš			
	YH			

Nom. sg. fem. /θvai, hvai/ < *-eh₂-i (see IV 53.3), cf. Lat. *quae, hae-c*; the type is unknown in Sanskrit.

/hva-/ has pronominal inflection in /hvahyāi/ dat. sg. fem., where Sanskrit has nominal *svāyai*.

3. *Demonstrative pronouns*

The following stems are found:

1. /*ha-, ta-*/ and /*hau, ava-*/

/*ha-, ta-*/ is Skt. *sá(s) sā́ tád*. The nom. sg. is not found (one would expect
*hā < *ha, **hā̄*, *hō < *hah). It is replaced by *hvō*, which must be read
/*hau*/. LAv. has m.f. *hāu*, OP *hauv*. This may point to an earlier m. *hau,
f. *hāu. They may be *sa, *sā + *u*, or perhaps *au with an added *s-* taken
from *sa*; in the latter case *sau can be secondary (note that GAv. has
m./*hau*/, f./*hā*/).

/*ava-*/ is derived from PIE *h₂eu as is OCS *ovъ*; Sanskrit has only gen.
du. *avoḥ*.

2. /*a-, i-*/ with /*ima-*/ and /*anā*/.

/*i-*/ provides the accusative forms (/*im, īš*/, ntr. pl. /*ī*/), /*a-*/ the others
(/*ayam*/ is based on PIE *h₁e, with a deictic -*i*). The existence of a form
/*ah*/ (wr. *ā*, 29.6a) is doubtful. /*as-cit*/ rather contains the personal pro-
noun /*az*/.—The gen. du. *̇ås-ca* might be /*a-ʔāh*/.—The fem. instr. is
/*ayā*/ (wr. *ōyā*; it cannot be from /*aiva-*/ 'one', see II 18.6).

/*ima-*/ is derived from *imam, which is *im + the particle -*am*, reinter-
preted as *a*-stem. The YH has *imām, imā*; that GAv. has no such forms
may be accidental.—The instr. /*anā*/ is based on a Pie particle *h₂en, as
is OCS *onъ*, Lith. *anàs*.

3. /*hī*/ provides fem. nominatives and accusatives, and a nom. du. ntr.
The form originated from PIE *Hih₂, the feminine of *h₁e (Av. /*a-*/
above). From the paradigm it is clear that it (still) functions as the
feminine (and neuter) of /*a-*/. It got an *s-* from *so. Sanskrit has only *sīm*,
which agrees with /*hīm*/.

4. /*hai*/, LAv. *hē, šē*, OP *šaiy* continue PIE *soi (Gr. *hoi*), which seems an
isolated form. (It might be an old dat.-loc. from **h₁e/o-*, i.e. *h₁oi, with
s- from *so). In Indo-Aryan it is found in MInd. *se*.

A stem /*ada-*/ has been assumed for *adāiš* 48.1a, 35.4, but the form has
also been interpreted differently (/*at āiš*/).

Not found in Gathic are, perhaps accidentally, Av. *di-* and *aēša-, aēta-*.

| | ha-, ta- | | hau, ava- | | a-, i-, ima-, ana- | | hī- | hai |
	m.	f.	m.	f.	m.	f.	ntr. f.	m.f.
Ns		*hā*	*hau*		*ayam*; *ah*?		*hī*	
A	*tam*	*tām*		*avām*	*ĭm*	*imām* YH	*hĭm*	
ntr.	*tat*		*avat*		*it*			
G					*ahya*			
Ab					*ahmāt*			
D					*ahmāi*	*ahyāi*	· ·	*hai*
I	*tā*		*avā*		*anā*	*ayā* ?		
L					*ahmi*			

	m.	f.	m.	f.	m.	f.	ntr.	f.
Np	*tai*							
A	*tanh*	*tāh*		*avāh*	*iš*			*hīš*
ntr		*tā*				*ī, imā* YH		
G			*avaišaᵓam*		*aišaᵓam*			
D					*aibyah*	*ābyas-*		
I	*tāiš*		*avāiš*		*āiš, anāiš*	*ābiš* YH		
L						*āhu* YH		
Nd	*tā*						*hī*	*hī*
G					*ayāh, (aᵓ)ās-?*			
D						*ābyā* (?)		

4. *The relative pronoun*

The relative pronoun is /ya-/, cf. Skt. *yá-*, Gr. *hós*. Not clear is why the neuter /yat/ is written *hyat*; it must continue PIE **iod*. Note that it is not written *ḱ* (*x́*). Perhaps it indicates that *y-* was voiceless.

	m.	f.
Ns	*yah, yas-*	*yā*
A	*yam*	*yām*
ntr	*yat*	
G	*yahya*	
Ab	*yāt* YH	
D	*yahmāi*	
I	*yā*	
L	*yahmi*	
Np	*yai*	*yāh, yās-*
A	*yanh, yans-*	
ntr	*yā*	
G	*yaišaᵓam*	
D	*yaibyah, -as-*	
I	*yāiš*	
L		*yāhu*
Nd	*yā*	
G	*yayāh*	

5. *The interrogative and indefinite pronouns*

The situation is rather complicated. The Gathic evidence is limited, but the situation seems clear.

Interrogative:

/ci-/, only Ns /ciš/ (43.7c, substantivally);

/ka-/, all forms, as substantive and as adjective;

/katara-/ 'which of the two'. (The form is written with the second *a* long. Perhaps this is only graphic).

Indefinite:

/ci-/ + /-ca/; as subst. (only after relative);

/ka-/ + /cit/; subst. and adj. (often after relat.);

/cahya/ gen. sg. masc. (48.9a, 50.1a; in the latter place it is also taken as neuter);

/mā ciš/ 31.18a;

/naiciš/ 'nobody'.

Thus, interrogative are both /ci-/ and /ka-/; when indefinite they are followed by /-ca/ and /cit/ resp., or preceded by a negative particle (/mā/, /nai-/; which make interrogative interpretation impossible). /cahya/ (indef.) is formally distinguished from interrogative /kahya/.

Interrogative /ciš/ occurs only in /ciš ahi, kahya ahi/, cf. Skt. *ko 'si kasyāsi* 'who are hou and on whose side are you?'. (This is the only occurrence of /kahya/ in Gathic.)

/ci- + -ca/ occurs only after the relative /ya-/:

/yastai cišca/ 43.16b

/yā zi cīca/ 47.5b

(This construction occurs twice again in LAv., Y 9.28, V 3.41; GAv. 47.5b is uscd in Y 12.1). As to /ka- + cit/, it is mostly found after a relative, but interpretations differ:

/kascit/ 49.5c

/kahmāicit/ 43.1a, 44.16e

/kācit/ 46.8c

/kahyācit/ 33.11c

	interrogative masc.	fem.	indefinite masc.		fem.
Ns	kah, kas-; ciš	kā	kascit; cišca; (mā) ciš;	naiciš	
A	kam	kām		naicim	
ntr	kat			naicit	
G	kahya		cahya		
D	kahmāi		kahmāicit		
I	kā		kācit		
L					kahyācit
Np	kai				
A	kanh				
ntr	kā		cīca		
G					
D	kaibyah				

6. *The proniminal adjectives*

Only a few of the adjectives that have pronominal inflection in Sanskrit occur in Gathic. From /uba-/ 'both' and /katara-/ 'which of two' forms that could have pronominal inflection do not occur.

/visva-/ 'all' does not have pronominal inflection: dat. /visvāi, visvāya/, nom. pl. /visvāhah/, gen. /visvanaɔam/. LAv. has pronominal inflection here. GAv. may have preserved the older situation.

CHAPTER EIGHT

THE NUMERAL

Cardinals

/aiva-/ 'one'. The form ōyā 47.2d does not belong to /aiva-/, see II 18.6.
The instr. sg. /aivā/ does not favour it either.
/dasa/ 'ten'.

Ordinals

/parvia-/ 'first', Skt. pūrvyá-, PIE *prHu-io-, with -ia- according to Sievers'
    law (-iHo- would have given Skt. -yà-).
/dbitīya-/ 'second' occurs only as adverb in -am 'for the second time'; Skt.
    dvitīya-.
/haptaθa-/ 'seventh', Skt. saptátha-.

CHAPTER NINE

INDECLINABLES

There is a large number of indeclinables (I counted 93 of them). Here we are concerned with their form only. The discussion of their use belongs to the syntax. It seems most convenient to give a full list of all indeclinable forms. After that they will be grouped according to their function.

1. Alphabetical list

/abi/ adv., prep. towards, 7 × (*abhí*, OP *abiy*).

/ada/ adv. then 29.2a, 30.10a (*ádhā̆*). a- + *-dhā̆*.

/adah/ adv. under, below 44,4b (*adhás*). *ṇdh-és*, Goth. *undar*.

/antar/ adv., prep. within, between 33.7c, 49.3d, 51.1b (*antár*).

/anu/ prep. after, according to, towards 32.16c, 47.2b (*ánu*, OP *anuv*).

/anyadā/ adv. elsewhere YH 35.2 (cf. *anyátra*).

/anyaθā/ adv. otherwise 51.10a (*anyáthā*). Suff. *-thā*.

/apa/ adv. away from 32.9b, 33.4a (*ápa*).

/api/ adv., prep. upon 6 × (*ápi*). PIE *épi* and/or *ópi*.

/aram/ adv. correctly, properly 44.8d, 45.11c, 51.14a (*áram*).

/asnāt/ adv. from nearby 45.1b (-). Abl. of *asna-* < *ṇsd-na-*, cf. /*nazd-išta-*/.

/aθā̆/ adv. thus, 10 × (*athā̆*) a- + *-thā*.

/aθrā/ adv. here, there, then 31.12a, 46.16a (*átrā̆*). a- + *-tra-*.

/aura/ adv. down(ward) 53.7c (cf. *áva*).

/ava/ adv. down, off, 4 × (*áva*, OP *ava*).

/avai/ interj. alas 45.3e.

/avar/ adv. down(ward) 29.11c (*avár*).

/avat/ adv. so long 28.4c (-).

/azdā/ adv. certainly 50.1d (*addhā́*, OP *azdā*).

/ā/ adv. hither, towards; passim (*ā́*, OP. *ā*).

/ākāh/ adv. certainly? 4 × (-).

/āt/ adv., then, but, and; passim (*ā́t*). Abl. of a-.

/āviš/ adv. openly 33.7c (*āvís*).

/bā̆/ part. really YH 35.5, in *bāt* (cf. *bát*, *baḍā*).

/baduš/? adv.? ? 53.4c.

/-ca/ and, passim (*ca*, OP *cā*). PIE *-kʷe*.

/cana/ part. of generalisation and indefiniteness, 30.6a, 31.10c (*caná*). Written *cinā*.

/cit/ part. of emphasis, passim (cit, OP -ciy). Ntr. sg. of *$k^{w}i$-.

/ciθna/ interrog. adv in any way 44.20a (-). cit + -na.

/d(a)ršat/ adv. boldly 33.7a (dhṛṣát). Acc. sg. ntr. of adj. in -ant.

/dbitā/ adv. deceitfully, Ins. by himself, 49.2b (dvitā́, OP duvitā-).

/dbitīyam/ adv. for the second time 45.1d (dvitīya-, OP duvitīyam).
  Acc. sg. ntr: of 'second'.

/dūrāt/ adv. from afar 45.1b (dūrā́t). Abl.

/dūrai/ adv. far away 34.8c (dūré). Loc.

/fra/ adv., prep. in front 30 × (prá, OP fra-).

/fradivā/ adv. long since, continuously 32.14b (cf. pradívas, -vi). Instr.

/fravrt/ adv. continuously 30.5c, 53.2b (-). Acc. sg. ntr.

/hacā/ prep. from, out of, in accordance with, 16 × (sácā, OP hacā).

/hadā/ adv., prep. together with, 29.2b, 46.17c, 50.4b (sahá, sadha-, OP
  hadā). Probably *sṃ- 'one'.

/ham/ pref. together, 14 × (sám, OP ham-). PIE *sṃ-, 'one'.

/hanar/ prep. without 31.15b, 47.5c (sanutár). PIE *snH- ?

/haθrā/ adv. together, at the same time, Ins. completely, 28.4a, 30.9c
  (satrā́). *sṃ-.

hyat see /yat/.

/ida/ adv. here 29.8a (ihá, OP idā).

/iθā/ adv. thus, 4 × (itthā́).

/kadā/ adv. when, 6 × (kadā́).

/kat/ adv. ?, when? 28.5a (-). Acc. sg. ntr.

/kaθā/ adv. how, in what way? 11 × (kathā́).

/kū/ interr. adv. where? 51.4b, 53.9c (kū́).

/kuda/ adv. where, 29.11a (kúha). OCS. kъde, PIE *ku-dhe.

/kuθra/ adv. where, whither, 8 × (kútra).

/ma/ emphatic part., 12 × (sma).

/maš/ adv. soon? very (much)? 32.2b, 34.9c (-).

/mašū/ adv. soon 53.8d (makṣū́).

/manh/ adv. in mind, 5 × . Cf. /manah/.

/mat/ prep. (together) with, 9 × (smát). *sm- 'one'.

/mā/ negative part., 31.17b.18a, 48.5a (mā́, OP mā). PIE *mē.

/naida/ neg. part., and not, 5 × (-).

/nait/ negatory part., passim (nét, OP naiy). PII. na + it.

/nānā/ (nanā) adv. separated, differently 48.4d (nā́nā).

/ni/ prev. down, back, into (ni, OP niy). PIE *ni.

/niš/ adv. out(side) 44.13b (nís).

/nū/ adv. now, 6 × (nú, nū́).

/nūram/ adv. now 31.7c (cf. nūnám). Dissimilated from *nūnam, or rebuilt.

/pari/ prev. prep. round, about, against, beyond, 15 × (pári, OP pariy).
  PIE *péri.

/pati/ prev. prep. towards, against, 14× (OP *patiy*; cf. *práti*). PIE *póti* (beside *próti, préti*).

/parah/ adv. prep. over, above 33.7b, 34.5c (*paráḥ*, OP *para*). Gen. sg., cf. Skt. *paré* (loc.), *param* (ntr.). PIE *peros*, cf. *pari* < *péri*, Gr. *pérā(n)*, Arm. *heri*, Osc. *perum*. Cf. /parā/.

/parā/ adv. prev. away (from) 53.6c.7c (*párā*, OP *parā-*). From *per-* in /parah/.

/parā/ adv. prep. before, 4 × (*purá*). PIE instr. *prh₂éh₁*, cf. Skt. *purás*, Gr. *páros* < *prHós*.

/rš/ adv. correctly, passim. Cognate with /aram/.

/tarah/ adv. prev. across, apart, superior to 45.11b (*tirás*). PIE *tr̥Hós*.

/tā/ adv. in this way, 5 × . Instr.

/tū/ part. now, but, 8 × (*tu, tú*).

/θvat/ adv., then again, now...now 44.3d (*tvád*). Acc.sg.ntr. (Skt. *tva-* one, several). Hitt. *duu̯an ... duu̯an* 'd'un côté ... de l'autre'.

/uta/ part. and YH 35.6, 40.4 (*utá*, OP *utā*).

/uti/ adv., thus 45.2b, 38.4, 39.3 (*íti*). The difference between *u-* and *i-* has not been explained.

/upa/ prev. towards 30.6b, 45.5d, 53.8b. (*úpa*). P/IE *Hupo*.

/us/ prev. up(on), 5 × (*út*, OP *ud, us*). The Avestan form developed before *t-*.

/vai/ emphasizing part. truly, indeed YH 36.3 (*vái*).

/vasah/ adv at will, 4 × (-). Acc. sg. ntr. of /vasah-/.

/vayai/ interj. woe 53.7d (-).

/vā/ part. or, passim (*vā*).

/vā/ emphasizing part., 7 × (*vává*). The Skt. word, with two accents, was built from two words.

/vi/ prev. apart, off, passim (*ví*, OP *vi-*).

/yadā/ adv., conj. when, 4 × (*yadá*, OP *yadā-taya*).

/yat/ conj. when, because, (so)that, passim (*yád*). Acc. sg. ntr. written *hyat*.

/yaθā/ adv., conj. in which manner, just like, passim (*yáthā*).

/yaθna/ adv., conj. how, as 31.22a?, 43.10d?, 35.2 (-). *yat* + *-na*, cf. /ciθna/.

/yaθrā/ adv. where, whither, in order to, passim (*yátrā*).

/yāvat/ adv., conj. how far, as far as, 5 × (*yávat*). Acc. sg. ntr. of *yāvant-*.

/yāvatā/ adv. inasmuch as 43.8e (-). Instr. sg. of *yāvant-*.

/yāt/ adv. since, in so far 32.4a, 35.7? (*yát*). Abl. of *ya-*.

/yazi/ conj. as, because, if, when, (8 × (-). From *yat* × *zi*?

/zi/ part. for, indeed, passim (*hi*). PIE *ǵhi*.

2. Categories

We can distinguish the following categories:
21. Adverbs
22. Prepositions/preverbs
23. Connectives
24. Negations
25. Particles
26. Interjections

21. *Adverbs*

There is no regular way in which adverbs were derived from adjectives, though the accusative neuter singular or plural was not infrequently used as an adverb. In other instances we must primarily distinguish between adverbs that are synchronically analyzable and those that are not. (Of course there are doubtful cases, so there is no sharp dividing line). The latter group must not be presented in the morphology, but in the lexicon. Of this latter group some may be analyzable historically. If they show a recurrent morphological pattern of an older phase of the language, they may be mentioned in an historical grammar; if they do not belong to a recurrent pattern, they must be treated in an etymological dictionary.

Most of the prepositions/preverbs can be used as adverbs.

21.1. Analyzable adverbs
21.1a. Case forms

Accusative

aram	*fravrt*
avat	*kat*
ākāh	*θvat*
baduš?	*yat*
cit	*yāvat*
d(a)ršat	*vasah*
dbitīyam	

Ablative

āt	*asnāt*
yāt	*dūrāt*

Locative
dūrai

Instrumental
tā
yāvatā
fradivā

21.1b. With suffixes

-da	*-θā*	*-θra*
ada	*aθā*	*aθra*
ida	*iθā*	
kada	*kaθā*	
kuda		*kuθra*
yada		*yaθra*
anayada	*anyaθā*	
hada		*haθra*
naida		

21.2 Unanalysable adverbs

adah	*mašu*
aura	*manh*
avar	*nānā*
āviš	*nū*
azdā	*nūram*
dbitā	*rš*
kū	*uti*
maš	

22. *Prepositions/preverbs*

These are mainly very old adverbs. Most of them can be used as independent adverbs, but also as pre-or postpositions with nouns or as preverbs. A few seem to have been used only as pre-/postpositions, others only as preverbs.

prep.-prev.	prep. only	prev. only
abi	*hacā*	*apa*
antar	*?hada*	*fra*
?anu	*hanar*	*ham*
api	*mat*	*ni*
ava	*parā* before	*niš*
ā		*us*
pari		*vi*
pati		
parah		
parā away		
?tarah		
?upa		

23. *Connectives*
-ca
vā
ula

24. *Negations*
nait
naida
mā

25. *Emphatic (etc.) particles*
bă
cana
cit
tŭ
vai
vā
zi

26. *Interjections*
avai
vayai

CHAPTER TEN

THE VERB

1. The verbal system

The verbal system of Gathic is almost identical to that of Vedic. For a comparison of the forms of etymologically cognate roots see §17.

Gender There is an active and a middle. Passive presents are derived with -ya-, and there is an isolated 3 sg. passive aorist.

Number There is a singular, a dual and a plural. Only a few dual forms are known from our texts.

Stems and moods In the following table the number of different forms (not their occurrences) is given. (A = active, M = middle):

		Present				Aorist			Perfect
		ath.			them.				
tot.		root	red.	nas.	them	root	them.	sigm.	pf.
		A-M	A-M	A-M	A-M	A-M	A-M	A-M	A-M
	ind.	22- 7	4- 6	6- 4		—	—	—	15- 4
	imf.	} 8- 4	8- 0	6- 1		21-15	9- 2	9-10	
	inj.								
82-33	sub.	13- 2	3- 1	1- 2	9- 8	36-10	5- 2	14- 8	1- 0
38-13	opt.	10- 1	1- 1	0- 0	8- 2	14- 6	4- 3	0- 0	1- 0
	imp.	8- 0	1- 3	2- 0		8- 6	3- 3	2- 4	0- 0
	tot.	51-14	17-11	15- 7		79-37	21-10	25-22	17- 4

The injunctive is defined as having secondary endings and no augment. As the augment is almost absent from Avestan, the imperfect and the indicative aorist are almost absent. It is clear that the function of the injunctive in Avestan is entirely different from that in Vedic.

2. The augment

The augment is very rare in Avestan. In Gathic it is found, except in forms of /ah-/ be, only in aorists; but this may be accidental.

In a few cases it is not certain whether we have an augment or the particle *ā*. The particle is certain for 30.2a *avaēnatā*, which is an imperative, /ā vainatā/. It is also assumed for *acistā* 51.11c, *ajə̄n* 48.10b and *anąsat* 53.7c.

The following cases remain:

/aꝰaram/ 43.10, written *ārəm*. Here too /ā ꝰaram/ has been assumed, but it would be the only occurrence of *ā* with *ar-*.

/vi adarsam/ 45.8b.

/asruvātam/ 30.3a

/asru(ž)dvam/ 32.3c. (Here a glide between -*š s-* has been assumed, as the verse is too long.)

/amahmadi/ YH 35.7

/avāci/ YH 36.6.

/avaucāma/? YH 38.5. Uncertain.

From *ah-* be:

/aꝰas/ 31.9a, written *as*;

/āhva/ 29.5a, written *ahvā*. Uncertain.

The verb *ah-* had no injunctive forms in Indo-Iranian. Therefore *ahvā* will be /āhva/ from *Ha-Hh-*. There are five forms *as* in the Gāthā's, found together in 31.9a (two) and 34.8 (three). All facts could be accounted for as follows:

31.9a first *as* : /aꝰas/ he was;

second *as*: read /ašxratuš/ of great determination;

34.8a and c : /as/ 3 sg. inj. aor. of ²*ah-* throw;

34.8b : read /ašaujāh/ of great strenght.

Thus both cases of augment before a root beginning (apparently) with a vowel (*a-*), had /aꝰa.../, i.e. /aꝰas/ and /aꝰaram/.

3. Reduplication *

Reduplication is found in the reduplicated presents (the third-class), the reduplicated *a*-aorists, the perfect, the desideratives, and the intensives.

Reduplication normally consists of the first consonant of the root plus a vowel. For the roots beginning in a vowel see below. The intensives have a different type of reduplication, see below.

The consonant

The consonant is the first consonant of the root: /dadā-, ruraud-, nansa-, vavrāz-/, /yait-/from /yat-/.

If this consonant is a velar, the reduplication has a palatal (as PIE had *e* or *i* as reduplicating vowel): /cāxn-, cikait-, jigrz-, cixšnuša-/.

If an original stop has become a fricative, the reduplication has the stop: /pafr-, cāxn-, cixšnu-/.

If the root has *h-* from PIE *s-*, the reduplication has *h-*; in the cases we have, the root has zero grade and the *s-* is retained, or *s* became *š-* after-*i-*: /hi-šāy-/ < *si-sāy-, /hišsa-/ < *si-sd-so.

The vowel

The reduplicating vowel is *a*, *ā*, *i*, or *u* (for the intensives see below). The desideratives have always -*i*-, even if the root has -*u*- (where Sanskrit reduplicates with -*u*-): /cixšnu-/. PIE probably had *e* and *i* in the present, *e* in the aorist and the perfect. PII inherited these forms, but introduced *i* or *u* if the root had *i* or *u* both in the present and in the perfect (there are no relevant forms of the aorist in Gathic):

pres. /ruraud-/

pf. /cikait-, hišāy-/

Instead of *a* sometimes *ā* is found. This *ā* is also found in Sanskrit, but not always. No rule has been established. In some cases it may not be a linguistic reality.

In **hišta-* (< **si-stH-a-*) the -*i*- disappeared and a form /(x)šta-/ resulted; see IV 631b.

Roots beginning with a vowel

If the root seems to begin in a vowel, it had mostly a preceding laryngeal. Only such cases are known: /uz-ʔiʔrdyāi/ [-ʔiʔr̥] < **-Hi-Hr̥-* (root ʔar/ʔr < **Har/Hr*).

The laryngeal is also preserved in /ʔraʔršya-/[ʔraʔr̥šya-], where the root began with a laryngeal before consonant.

In the forms where the root has zero grade, normal reduplication gave a long vowel:

*Ha-Hr- > /ārai/-,

*Hi-Hr-a- > /īra-/.

iša- is interpreted as /īša-/, the desiderative of /ʔi-/ go'. This would require **Hi-Hi-so-*, which would probably have disyllabic /ʔiʔiša-/, which the metre does not allow. If it was the desiderative of *yā*- 'go' (**HyaH-* from **Hai-/Hi-* 'go'), it was **Hi-HiH-so-*, which gives the same problem. Therefore the interpretation is uncertain.

The intensive reduplication

The intensive reduplication consists of the first consonant + *a* + the resonant following the *a* of the root or, if there was no such resonant, the first two consonants + *a*.

$C_1aR-C_1aR(C)$　　*zau*-: /zau-zau-/; *dais*-: /dai-dais-/

$C_1C_2a-C_1C_2(a)C$　　*ʔrah/s*-: /ʔra-ʔrš-ya-/.

4. The endings

The present and aorist endings

There are primary and secondary endings. The first are found in the indicative present (and future), the latter in the imperfect, the indicative aorist, in the injunctive and in the optative. The subjunctive has endings of both systems, see §5. The imperative has special endings, but in the second plural it has the secondary ending.

The forms are the following:

		Active ath.	them.	Middle ath.	them.
prim.	1.	*mi*	*ā, āmi*	*ai*	*ai*
	2.	*hi*	*ahi*	*hai*	
	3.	*ti*	*ati*	*tai, ai*	*atai*
du	1.	*vahi*			
pl	1.	*mahi*	*āmahi*	*madai*	*āmadai*
	2.	*θa*	*aθa*	*dvai*	*advai*
	3.	*anti, ati?*	*anti*	*atai*	*antai*
sec.	1.	*am*	*am*	*i*	
	2.	*h/s/š*	*ah*	*ha/sa/ša*	
	3.	*t/θ*	*at*	*ta*	*ata*
du	1.	*va*		*vadi*	
	3.			*ātam*	*aitam*
pl	1.	*ma*	*āma*	*madi*	
	2.	*ta*		*dvam*	
	3.	*an, at*	*an*	*ata*	*anta*
sub.	1.	*ā(ni)*	*aɁā(ni)*	*āi, ānai*	*aɁāi*
	2.	*ahi*		*ahai*	
	3.	*at(i)*	*aɁat*	*atai*	*aɁatai*
du	3.				*aitai*
pl	1.	*āma*	*aɁāma*		*(aɁ)āmadai* YH
	2.	*aθa*		*advai*	
	3.	*an(ti)*	*aɁan(ti)*	*antai*	*aɁuntai*
opt.	1.	*yaɁam*		*iɁa*	*aya*
	2.	*yāh* YH	*aiš*	*īša*	
	3.	*yāt, īt*	*ait*	*īta*	*aita*
pl	1.	*yāma, īma*	*aima*	*īmadi*	*aimadi*
	2.	*yāta*			

Active

1 sg. Ath. prim.: sec. -*mi*: -*am* (after consonants). -*am* is -*a* < *-*m̥* enlarged with postvocalic -*m* (which does not occur in Gathic).

Them. -*ā(mi)*: -*am*. -*ā* continues PIE -*oH*, -*mi* was added from the athematic forms; -*am* is from *-*o-m*.

2 sg. ath. -*hi*: -*h* (with *s* or *š* for *h* according to the preceding sounds) < *-*si*: -*s*.

Them. -*ahi*: -*ah* from *-*asi*: -*as*, for PIE *-*eh₁i*: -*es*.

3 sg. ath. -*ti*: -*t* (or *ø* < -*t*); them. -*ati*: -*at* for PIE -*e* : -*et*.

1 du. ath. -*vahi*: -*va*. -*vahi* < *-*vasi*, where -*i* is a PII addition.

1 pl. ath. -*mahi*: -*ma*, them. -*āmahi*: -*āma*. The -*i* is a PII addition.

2. pl. ath. -*θa*: -*ta*, them. -*aθa*: -*ata*. -*θa* represents PIE -*th₁e*.

3 pl. ath. -*anti*, -*ati?*: -*an*, *at* < *-*enti*, -*n̥ti*: -*ent*, -*n̥t*. The zero forms are found in the reduplicated presents, the intensives and the *s*-aorist. (-*ati* in /*vaividati*/ if this is 3 pl.) Avestan did not introduce an *r*-ending (Skt. -*ur*), except in the optative, for which Gathic has no evidence.

Middle

1 sg. ath. -*ai*: -*i*, them. -*ai*: -. -*i* continues *h₂ (cf. the *a* of Gr. -*mai*/ -*mān*), -*ai* is the thematic form (from *a* + *i*, not from -*aH*) used also in the athematic verb.

2 sg. ath. -*hai*: -*ha*, -*sa* (them. unknown). Skt. sec. -*thās* continues PIE -*th₂o*; the forms with *s*- are based on the active ending.

3 sg. ath. -*tai*, -*ai*: -*ta*, them. -*atai*: -*ata*. -*ai* in /*īsai*/ 50.1a.

1 du. ath. -: -*vadi*, them. -:-. PIE -*uedhh₂*.

3 du ath. -: -*ātam*, them. -*aitai*: -*aitam*. Sanskrit has ath. -*āte*/*ātām*, them. -*ete*/-*etām*. The prehistory of these forms is unknown. (-*aitai* in sub. /*jamaitai*/44.15c, -*ātam* in /(a)sruvātam/ 30.3a, -*aitam* in /*jasaitam*/ 30.4a.)

1 pl. ath. -*madai*: -*madi*, them. -*āmadai*: -*āmadi*. -*madi* < *medhh₂, -*ai* after the singular.

2 pl. ath. -*dvai*: *dvam*, them. -*advai*: -*advam*. PIE -*dhue*.

3 pl. ath. -*atai*: *ata*, them: *antai*: -*anta*. PII -*nta* replaced PIE -*ro*.

The imperative endings

	Act. ath.	them.	Middle ath.	them.
sg 2.	-*di*, (-*i*)	-*a*	-*hva*, -*sva*	-*ahva*
3.	-*tu*	-*atu*	-*ām*	-*atām*
pl 2.	-*ta*	-*ata*	-*dvam*	-*advam*
3.	-*ntu*	-*antu*		-*antām*

Active

2 sg. ath. *-di*, s-aor. *(-s)-i*, them. *-a*. The imperative in *-si* did not originally belong to the s-aorist.

3 sg. ath. *-tu*, them. *-atu*.

2 pl. has the secondary ending *-ta*, *-ata*.

3 pl. ath. *-ntu*, them. *-antu*.

Middle

2 sg. ath. *-hva* (*-sva*, *-šva*), them. *-ahva*.

3 sg. ath. *-ām*, them. *-atām*, as in Sanskrit. *-ām* in the aorists /ucām/ 48.9c and /daʔām/ 32.6c.

2 pl. has the secondary ending *-dvam*, *-advam*.

3 pl. ath. -, them. *-antām*.

Passive

There is only one specific passive form, the 3 sg. aor. in *-i*. In origin this is probably a neuter *i*-stem.

The perfect endings

Only the indicative had specific endings. There is no primary: secondary opposition.

Act. 1 sg.	*-a*	1 pl.	*-ma*	Middle	
2	*-θa*				
3	*-a*	3	*-ar, -rš*	3 sg.	*-ai*

Active

1 sg. *-a*, PIE *-h2e*.

2 sg. *-θa*, PIE *-th2e*. (Note *-sθa* > *-sta*, /vaista/.)

3 sg. *-a*, PIE *-e*

1 pl. *-ma* is identical with the secondary pres.-act. ending.

3 pl. *-ar, -rš*. As PIE had *-r̥ or *-ēr, /-ar/ must represent *-r̥, which is confirmed by *-rš*. Skt. *-ur* corresponds with *-rš*. The *-s* is unexplained.

Middle

3 sg. *-ai* is a creation of PII.

5. The subjunctive

The subjunctive is made, with ablauting verbs, from the full grade stem, with the suffix *-a-* and a system of endings in which both primary and secondary endings occur.

Subjunctive (all forms)

ATH. PRES.

Active	Middle
1. *ahā-, tavā*	*aujāi, frinā̆i, īsā̆i*
ayāni, varāni	
3. *ahat, dadat,*	*vrnavatai*
ayat, mravat, vasat;	
ahati, mravati	
1. *ahāma*	
2. *zaɁaθa?*	
3. *ahan, dadan, krnavan;*	*dadantai*
zazanti	

THEM. PRES.

Active	Middle
1. *išaɁā, xšayaɁā*	*prsaɁā̆i, manyaɁā̆i, šyavaɁā̆i, jasāi, yazāi*
hanaɁāni, sanhaɁāni, ufyāni?	
3. *išaɁat*	
1.	YH *is(aɁ)āmadai*
3. *raɁršyaɁan*, YH *vrzyaɁan/ān;*	*baryaɁantai, hacaɁantai*
išaɁanti	

ROOT AOR.

Active	Middle
1. *jamā, hacā, yaujā;*	*manāi*
darsāni, carāni	*daɁānai*
2. *daɁahi*	
3. *ahat, ardat, buvat, caiθat, daɁat, darsat,*	
jamat, gaɁat, carat, maiθat, *nasat,	
paɁat, rādat syazdat, xraudat;	
buvati, daɁati, jamati,	*caiθatai, daɁatai,*
carati, mardati	*yamatai*
xrapati xraudati	
1. *daɁāma?*	
2. *cayaθa, zayaθa*	*daɁadvai*
3. *daɁan, jaman*	
buvanti, danti?, rādanti	*arantai, daɁantai,*
	yaujantai, vaxšantai
3. du	*jamaitai*

s-AOR.

Active   Middle
1. *daišā, varšā*   *haxšāi, manhāi, xšnaušāi*
                                 srraušānai, varšānai
2. *rāhahai*   *rāhahai*
3. *naišat, stāhat,*
   vraxšat, vanhat;
   baxšati?, jan-   *marxšatai,*
   hati, vanhati,   *varšatai*
   varšati
1. *našāma*
3. *xšnaušan,* YH *vanhan;*
   varšanti

a-AOR.
1. *fraʔā, hanaʔāni, vaucaʔā*   *xsaʔāi*
3. *vaucaʔat*   *vavraʔatai?*
1. *vaucaʔāma*

PERF.
1. *vaidā?*
2. pl. *vavrāzaθa*

The forms found are given above. There is a large number of subjunctives in the Gathas, owing to the character of the text.
The numbers are as follows:

	ath. pres.	them. pres.	root aor.	s-aor.	a-aor.	tot.
active	17	9	36	14	5	81
middle	5	8	10	8	2	33
						114

Active forms are more numerous, but perhaps not more so than in other moods.

The Stem

The stem of ablauting roots has full grade. From *dā-* the subjunctive forms have /daʔa-/: /daʔahi, daʔāma/ etc. Not clear is *azāθā* 50.7d (for *zāθā /zaʔaθa/?).

The only exception is /danti/ < *dH-anti. The reduplicating presents have zero grade: /dadati/ < *da-dH-at, /dadan, dadantai, zazanti/, the *nā-*

presents: /frinā̆i/ < *-nH-āi, but /krnavan/, and /ur-n-au-a-tai/, if *varənvaitē* 31.17a must be so read. In the reduplicated presents the type is old.

Irregular is /āhāma/ we shall be; it must be a mistake for /ahāma/. In *urvāxšat* the long ā will be graphic only (or after the otherwise identical indicative form). The long ā of *nāšāma* is also found in other forms of this root (*nas*-attain).

The Suffix

The suffix -a- is added to the athematic or the thematic stem. In the latter case a laryngeal was analogically introduced, which gave -aHa- > -aʔa-. This was later contracted into ā, which is found in our texts, but the metre shows that they must be read disyllabic. Only three forms seem to have the contracted forms, /jasāi, yazāi, ufyāni/, for which no explanation has been found. (One could emend to /ufyaʔā/, without -ni.) It is clear that the athematic verbs do not have the thematic ā, as in LAv., because it was disyllabic aʔã. See IV 53.3.

The Endings

The distribution of primary and secondary forms is largely the same as in Sanskrit.

Gatha-Avestan				Sanskrit			
Active		Middle		Active		Middle	
1.	-ā 10	-āi 19,		-ā 13		-ai	
	-āni 6	-ānai 3		-āni			
2.	-hi 1	-hai 1		-si	-s	-se	
3.	-ti 19	-t 54	-tai 8	-ti	-t	-te	(-tai 1)
1.		-ma 4	-madai 1 YH		-ma	-mahe,	-mahai
2.	-θa 2	-dvai 1		-tha		dhve	(-dhvai 1)
3.	-nti 6	-n 11	-ntai 7		-n	-nte	-nta
1.	du.				-va		-vahai
2.				-thas		-aithe	
3.		-aitai 1		-tas		-aite	

There are no differences between the different present-classes and the aorist types. (In LAv. primary endings are only found in the *nu*-presents and the *s*-aorist. Of the first category there are not enough forms to check this in Gathic; in the *s*-aorist both forms are well established.)

1 sg. The forms in /-āni/ are less frequent than those in -ā; middle /-ānai/ is rare, but well established. Note the difference with the Rigveda.

Middle forms are all primary (also in LAv.). In the Rigveda -nta is more frequent than -nte.

2 sg. The one form in /-hi/ does not allow conclusions (LAv. has -ō, -ǎ < *-as, -ās).

3sg. pl. The secondary forms are more frequent. In the Rigveda the 3 pl. has no primary form. The Rigveda seems to be the more conservative. Gathic introduced 3 pl. Act. -nti and in the 3 pl. middle -nta disappeared.

The distribution of the primary and secondary forms can be explained from the PIE paradigm. The subjunctive was identical to the thematic indicative, which in PIE had the following endings (first column):

PIE prim.	PIIr. sub. >		PIE sec.
$-oh_1$		$-\bar{a}$	$-om$
$-eh_1i$		$-as$ <	$-es$
$-e$		$-at$ <	$-et$
$-omom$		$-\bar{a}ma$ <	$-omo$
$-eth_1e$	>	$-atha$	$-ete$
$-o$		$-an$ <	$-ont$

Some of these endings were not retained in Indo-Iranian. In the subjunctive these were replaced with the secondary endings, because these were sufficient to characterize a form. (The indicative, where there was an opposition between primary and secondary forms, received primary endings.) Thus 3 sg. *-e became -at. Then -as was introduced for the 2 sg. For the 1 pl. *-omom was replaced with *-omo, but in the 2 pl. -atha was maintained. 3 pl. received added -nt.

The primary forms -si, -ti were introduced because the 1 sg. sub. -ā was identical to that of the indicative, which has primary endings. The middle forms got /-ai/ from the 1 sg., which had -a- with i < *h_2 (the 1 sg. middle ending). On the origin of -āi see IV 53.3.

6. The optative

The optative is made with the suffix yā/ī, PIE ieh_1/ih_1, and secondary endings. With the thematic vowel the suffix gave -ai-.

The following numbers are found:

	ath. pres.	them. pr.	root aor.	s-aor.	a-aor.	pf.	tot.
act.	11	8	14	0	4	1	38
mid.	2	2	6	0	3	0	13
							51

The preferene for active forms is even stronger than with the subjunctive. Noteworthy is the absence of s-aorist optatives (there are 22 s-aorist subjunctives). An active optative of the s-aorist is not found in Sanskrit

either. In its place a static root aorist optative was used (cf. YH
/varzīma/).

The forms are in the table.

Optative (all forms)

ATH. PRES.		THEM. PRES.	
Active	Middle	Active	Middle
1. *hya?am*			
2. *hyāh* YH	*xšnavīša*	*rapaiš* YH	
3. *hyāt, mruyāt,*	*dadīta*	*frādait, jasait,*	*vardayaita*
usyāt, mrnšyāt;		*išsait, vadayait?*	
pāyāt;			
dadīt, sāhīt			
1. *hyāma*		*srāvayaima,*	
		vanaima, zarnaima,	
2. *hyāta*			

ROOT AOR.		a-AOR.	
1. *dya?am*	*di?a[1], uxši?a?*		*vavraya*
2. *jamyāh* YH	*dīša[2]*		
3. *dyāt, dāyāt, asyāt[3],*	*drīta*	*sišait*	*xšaita* YH
jamyāt, miθyāt,			
sahyāt;[4]			
ciθīt			
1. *buyāma* YH, *jamyā-*	*manīmadi* YH,	*āpaima-* YH,	*vavraimadi*
ma YH, *sravīma,*	*varīmadi* YH	*hanaima* YH,	
varzīma YH, *zaima*		*vaucaima* YH	
YH			

PERFECT
3. *vidyāt*

The Ablaut of Root and Suffix

In Sanskrit the normal pattern with ablauting roots is that the root has
zero grade, the suffix full grade (-*yā*-) in the active except the 3 pl., zero
grade (-*ī*-) elsewhere. In Gathic the situation is much more complex.

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[1] *dyā*, 43.8d; *dH-iH-a*
[2] *dH-iH-sa*
[3] *frōsyāt* 46.8b; *nas-* attain
[4] *sahyāt; sanh-*

The middle has always -*ī*- for the suffix.

A rule that obtains almost without exception is that -*yā*- is preceded by a zero grade, which agrees with what we know from PIE rules. /*jamyāt*/ has *am* < *ṃ*. The exceptions are /*dāyāt*/ (6 times) which stands beside /*dyāt*/ (twice), and /*pāyāt*/ (46.8d). /*dāyāt*/ is a younger form, with *dā*- introduced to replace the zero grade. The old and the new form occur side by side. (Skt. *deyā́m* has its -*e*- from 3 pl. **daH-iH*-.)

-*yā*- was introduced into the plural in /*hyāma, -ta, buyāma*/ and /*jamyāma*/. This type corresponds to the Sanskrit type, but we have no 3 pl. form.

The reduplicating presents are represented by /*dadīt*/, where Sanskrit has *dadyāt*. The Avestan form seems to be the original one, because the reduplicated verbs have zero forms (notably 3 pl. /*dadat*/ < **da-dH-nt*), and because extension of -*ī*- is improbable.

The present /*sāhīt*/ with full grade of the root (*sāh*-, Skt. *śās*-, PIE **keHs*-) and zero of the suffix in the singular has been recognized as a trace of a (proto)static (akrostatic) inflection, with full grade of the root in all forms (see 71a). 29.4a /*ciθīt*/ is aberrant in having zero grade of the root. In the 1 pl. full grade is well represented: /*sravīma*, YH *varzīma, zaima*/ < **zaH-iH*-.

As the full grade of the root in the (proto)static type is also found in the middle, *xšnavīša* could be /*xšnavīša*/ (*əv* cannot be graphic for /*uv*/). /*varīmadi*/ can be **uḷH-iH*- or **uelH-iH*. Thus /*manīmadi*/ could have full grade *man*-, but it could also be *man*- < *mṇ*- (in other positions).

Both /*dyaʔam*/ and /*hyaʔam*/ are disyllabic. They have /-*yaʔam*-/ < -*yaHam*.

7. The athematic presents

71. The root present

The (athematic) root present is taken by some thirty roots; they are given below. The paradigm at the end of this section gives all forms.

Ablaut (the normal, mobile type)

As we have not many forms from each root, we have no very extensive evidence for the ablaut. It is remarkable that we find nearly as much evidence for the so-called static ablaut as for the normal, mobile ablaut.

There are two types of ablaut. The (proto)static type will be discussed in the next section.

The normal ablaut has full grade in the singular indicative and injunc-tive active, in the subjunctive, both active and middle, and in the 3 sg.

imperative active, but zero grade elsewhere. Roots in long -ā have given up the ablaut.

Only five roots show both ablaut forms (all their forms are given in the paradigm):

/ah-/ be, /ah-, as-/: /h-, s-/;
/i-/ go, /ai-, ay-/: /i-, y-/;
/mruʔ-/ say, /mrau-, mrav-/: /mrū-, mruʔ-/;
/vas-/ wish, /vas-/: /us-/;
/ši-/ dwell, /šai-/: /šy-/;

Stems

The stems may be grouped thus:

CaC	ah-	taš-	CaCC		
	hac-	vah-			
	hah-	vas-			
	hap-				
Cā	paʔ-		CāC	sāh-	
				rāθ- ?	
CaR	bar-		CaRC	garz-	
CaN	jan-		CaNC		
Ci(H)	i-		CiC	īs-	
	ši-			dviš-	
Cu(H)	mruʔ-		CuC	auj-	
	stu-				
	tuʔ-				
	xšnu-				

(-C is not H or resonant)

1. Roots CaC
/ah-/ be, /as-, ah-, s-, h-/ (Skt. *as-, ásmi*); see paradigm.
/hah-/ sleep, (*sas-, sásti*); /hahmi/ 34.5a.
/hap-/ hold, (*sap-* serve?, *sápati*); /hafši, hapti/.
/taš-/ shape, /taks-, tášti/); /tāšt/.
/vah-/ dress, /vas-/ (*vas-, váste*); /vastai/.
/vas-/ wish, /vas-, us-/ (*vaś-, vásmi*); see paradigm.
2. Roots Cā
/paʔ-/ protect, /pā-/ (Skt. *pā-, pāti*); /pāt, paʔat?, pāyāt/, ind. M /pāhai/.
3. Roots CāC
/rāθ-/? cling to?; (-); /rāšti/.
(cont. p. 164)

Root present, active; all forms (static forms in brackets)

ind.	1.	*ahmi*	*vasmi*	*mraumi*		*hahmi,* (*stāumi?*)
	2.	*ahi*	*vaši*			*hafši*
	3.	*asti* YH	*vašti*		*aiti*	*hapti, šaiti,* (*sāsti*)
1 du			*usvahi*			
	1.	*mahi* YH	*usmahi*			
	2.	*sta*	*ušta*			
	3.	*hanti*			*yanti*	*šyanti* YH, *dvišanti*
imf./inj.	1.					
	2.			*mrauš*		
	3.	*aɔas*		*mraut*		*pāt, jan,* (*tāšt*)
1 du		*āhva*				
	2.			*mrauta*		
	3.					
sub.	1.	*ahā-*			*ayāni*	*tavā*
	2.					
	3.	*ahat*	*vasat*	*mravat*	*ayat*	*paɔat?*
		ahati		*mravati*		
	1.	*ahāma*				
	2.					
	3.	*ahan*				
opt.	1.	*hyaɔam*				
	2.	*hyāh* YH				
	3.	*hyāt*	*usyāt*	*mruyāt*	*iyāt*	*pāyāt,* (*sāhīt*)
	1.	*hyāma*				
	2.	*hyāta*				
	3.					
imp.	2.	*zdi*			*idi*	
	3.	*astu*		*mrautu*		*bartu?,* (*sāstu*)
	2.		*ušta?*			
	3.	*hantu*				

Root present, middle; all forms (static forms in brackets)

ind.	1.	*mruɔai, grzai,* (*aujai*)
	2.	*pāhai*
	3.	*īsai;* (*vastai*)
	1.	(*augmadai-* YH)
inj.	1.	(*auji*)
	2.	(*augža*)
	3.	*gržda,* (*augda*)

sub.1.   *īsāi, (aujāi)*
   1.   *īsāmadai* YH
opt.1.
   2.   (*xšnavīša*)?
imp.

/sāh-/ teach, /sās-, sāh-/ (*śās-, śāsmi*); /*sāsti, sāstu, sāhīt*/.
4. Roots *CaR*
/bar-/ bring, (*bhr̥-, bhárati*); /*bartu*/ or /*baratu*/?

5. Roots *CaRC*
/garz-/ complain, /grz-/ (*gr̥h-, gr̥he*); /*grzai, gržda*/.
6. Roots *CaN*
/jan-/ slay, /jan-, ja-/ (*han-, hanti*); /*ā jan*/, inf. /*jadyāi*/.
7. Roots *Ci(H)*
/i-/ go, /ai-, i-/ (*i-, éti*); see paradigm.
/ši-/ dwell, /šai-, šy-/ (*kṣi-, kṣéti*); /*šaiti*, YH *šyanti*/.
8. Roots *CiC*
/īs-/ be able, (*īś-, īśe*); /*īsai, īsāi, īsāmadai* YH/.
/dbiš-/ hate, (*dviṣ-, dvéṣṭi*); /*dbišanti*/.
9. Roots *Cu(H)*
/mrū-/ speak, /mrav-, mrū-, mruʔ-/ (*brū-, brávīmi*); see paradigm.
/stu-/ praise, /stāu-/ (*stu-, staumi* AV); /*stāumi*/ (or /*staumi*/?)
/tuʔ-/ be able, /tav-/ (*tū-, távīti*); /*tavā*/
/xšnu-/ satisfy, /xšnav-/ (-); 2 sg. opt. M /*xšnavīša*/. (Perhaps root aorist.)
10. Roots *CuC*
/auj-/ say, (*ūh-, óhate* 3 pl.); see paradigm.

Notes

Active
2 pl. *θ* after *s, š* becomes *t*; see IV 31.
3 sg. inj. The *-t* is lost after consonant: /*aʔas, jan*/; see IV 821.
Subjunctive: see also section 5 above.
Optative: see also section 6.
Middle
2, 3 sg. On *gž* < **ghs*, *gd* < **ght* and *zd* < **ĝht* see IV 32 d.

71a The static inflection

The second type of ablaut is called static (protostatic or proterodynamic; *dynamis* 'accent'), because it had the accent always on the root. It had

lengthened grade in the singular indicative and injunctive active, full grade everywhere else. Traces of this type have also been found in the root aorist. The ablaut is due to the fact that some forms (2, 3sg. inj.) were monosyllabic (type *CeC-s, -t*). In that case the vowel was lengthened in PIE. The long vowel was then introduced into the 1 sg. In the *s*-aorist the whole ind. got the long vowel (the injunctive in Sanskrit still shows the original distribution). These forms have here been put together, because they are very few and because in some cases it is not certain whether a form is present or aorist.

Stems

The roots that present this ablaut are:

pres. /taš-/ (*takṣ*)   /auj-/(*ūh-*)   aor. /zaʔ-/ YH (*hā-*; not stat.)
/vah-/ (*vas-*)   /stu-/ (*stu-*)   /varz-/ YH (-)
/sāh-/ (*śās-*)   /xšnu-/ (-)   /sru-/? (*śru-*; not stat.)
/ciš-/? (-)

All forms are given below.
Remarkable is /cikaitrš/ 3 pl. ind. pf. of *cit-*.
Static forms of the root present and the root aorist

Active		Middle	
ind. pres.	aor	pres.	aor.
1. *stāumi?*		*aujai*	
2.			
3. *sāsti*		*vastai*	
1.		*augmadai-* YH	
inj.			
1.		*auji*	
2.		*-augža*	
3. *tāšt*		*augda*	*caišta?*
sub.			
1.		*aujāi*	
opt.			
1.			
2.		*xšnavīša?*	
3. *sāhīt*			
1.	*sravīma,*		
	varzīma YH,		
	za(ʔ)īma YH		
imp.			
2.			
3. *sāstu*			

72. Reduplicated presents

Stems

1. Roots in -a?

/da?-/ give, put, /dadā-, dad-/ (d(h)ā-, dád(h)āti); see paradigm.

/ma?-/ determine, /mimā-/ (mā, mímīte); 2 pl. mīmaθā 32.4a. If this form is indicative, it must stand for /mimāθa/. If the -a- is short, it must be a subjunctive, or a thematic indicative.

/za?-/ come in first, /zaz-/ (hā-, jáhāti); 3 pl. /zazat/, sub. /zazanti/.

2. Other roots.

/danh-/ teach, /didanh-, didah-/ (-); 3 sg. inj. /didans/, 1 sg. ind. M. /didahai/.

/di-/ see, /dady-/ (dhī, ádīdhet); 3 pl. inj. /dadyat/.

/garz-/ complain, /jigrz-/ (grh-, -); 3 pl. jigrzat/.

?/hac-/ accompany, /hišc-/ (sac-, sísakti); sub. /hišcāmadai/ YH 40,4 (written with short -a-); if the form is ind., it is thematic.

/ar-/ rise, /i?r-/ (r̥-, íyarti, īrte); inf. /i?rdyāi/ < *Hi-Hr.

/rud-/ hold back, /ruraud-/ (rudh-, -); /rurauśt/. Or pluperfect? See §10.

/yā-/ ask, /i?-/ (ímahe); 1 sg. ind. /i?ai/31.2b, imp. /īdvam/. If the root was *HiaH-/HiH-, we would have Hi-HiH-, with loss of the laryngeal between identical vowels.—The forms are also taken from /i-/ go.

   Thematized forms are:

/ar-/ rise, /īra-/; imp. /īratu/ 53.8d, from *Hi-Hr-a-. See above.

/mā-/ determine, /mima-/ if /mimaθa/ is ind.; see above.

/stā-/ stand, /xšta-/ (stā-, tíṣṭhati); inj. /xštat/ 51.4a. /xšta-/ stands for *hišta- with loss of the -i-.

   Reduplicated presents (all forms)

		Gathic Active		Middle	Sanskrit Active	Middle
ind.	1.			dadai, i?ai, didahai	dadhāmi	dadhé
	2.				dadhāsi	dhatsé
	3.	dadāti		dazdai, dastai	dadhāti	dhatte
	1.	dadmahi	YH	dadmadai YH	dadhmasi	
	2.		mimāθa?		dhatta	
	3.	dadati			dádhati	dadhate
inj.	1.				adadhām	
	2.	dadāh			adadhās	adatthas
	3.	dadāt	rurauśt, didans		adadhāt	adhatta
	1.					
	2.				adhatta	
	3.	dadat	zazat, jigrzat dadyat		adadhur	

sub.	1.				dadhāni	
	2.				dadhas	dadhase
	3.	dadat			dadhat	dadhate
	1.			?*hiščāmadai YH	dadhāma	(dadāmahe)
	2.	mimaθa?				
	3.	dadan	zazanti	dadantai	dadhan	
opt.	1.					
	2.					
	3.	dadīt		dadīta	(dadyāt)	dadhīta
	1.					dadhīmahi
	2.					
	3.					(dadīran)
imp.	2.			dasva	dhehi etc.	dhatsva
	3.	dadātu			dadhātu	
	2.			dazdvam, īdvam	dhatta,	(dadāta)
	3.				dádhatu	
inf.				dazdyāi, iˀrdyāi		

Notes

Active

The 3 pl. has /-at(i)/ < *-n̥t(i). Avestan has no r-ending for this form. The subjunctive has zero grade of the root: *da-d(h)H-a-t.

On /dadīt/ see on the optative, §6.

Middle

/dastai/ is from *da-dH-tai > *dadtai > *da(t)stai, and /dazdai/ from *da-dhH-tai > *da(d)zdhai > dazdai. (In Sanskrit the Bartholomae-form was analogically replaced.) If -dH- resulted phonetically in -dh-, -d- must have been restored.

Imp. /dasva/ is from *da-dH-sva > *datsva (*da-dhH-sva would have given *dadzva > *dazva). Thus *da-d(h)H-dhvam > *da(d)zdvam.

73. The nasal presents

Nasal presents of the old type CR-n-(e)C- are well represented. The forms are exactly parallel to the Sanskrit ones. Only the nā-presents have single -n- where Sanskrit has -ni- from -nH-. As in Sanskrit, the nā-presents introduced the anteconsonantal form of the zero grade before the -n-: /zān-/, Skt. jānāti, probably /frīn-/, if the -i- is really long (hunāitī might have /hūn-/).

The full grade in the plural (injunctive) /db(a)nauta/ has parallels in Sanskrit, ákr̥ṇota beside more frequent forms in -nuta.

Stems

1. Stems in -*nu*

-/*ci*-/ choose, /*cinau*-/ (-); /*cinaut*/, /*cinvant*-/.

/*dbu*-/ deceive, /*db*(*a*)*nau*-/ (*dabh*-, *dabhnuhi*); 2 pl. inj. *dabanaotā* /*db*(*a*)*nauta*/. The metre lacks a syllable (32.5a), which is why -*an*- has been assumed. It could be the vocalization of a difficult consonant cluster. Perhaps we must read /*tā* < *ā* > *dbnauta*/. Sanskrit introduced the full grade *dabh*-.

/*kar*-/ make, /*krnav*-/ (*kr̥*-, *kr̥návan*); 3 pl. sub. /*krnavan*/.

/*spas*-/ look upon, /*spašnu*-/ (-); /*spašnuθa*/.

/*sru*-/ hear, /*srnv*-/ (*śr̥ṇóti*); /*srnvant*-/ YH.

/*var*-/ turn, /*vrnav*-/ (-); 3 sg. sub. /*vrnavatai*/ 31.17a. The text makes it probable that the form is subjunctive, which would have been /-*navatai*/, but the writing *varanvaitē* is against this reading. Also /-*nvatai*/ cannot be (3 sg.) indicative.

2. Stems in -*nā*

/*frī*/ please, /*frīn*-, *friʔan*-/ (*prī*-, *priṇā́ti*); 1 sg. subj. /*frīnāi*/, YH /*friʔanmahi*/, see II 13.5. (The participle /*frīnamna*-/ is thematic.)

/*hū*-/ urge, /*hūnā*-, *huʔan*-/ (*sū*-, -); /*hūnāti*/, YH /*huʔanmahi*/ (see II 13.5).

/*var*-/ choose, /*vrn*-/ (*vr̥*-, *vr̥ṇīté*); /*vrnai*, *vrntai*, *vrnata*/.

/*zan*-, *xšnā*-/ get to know, /*zān*-/ (*jñā*-, *jānītá*); 2 pl. imp. /*zānta*/ 29.11b. The form is written *zānata*, but the verse is one syllable too long; from *nH*-*ta* we expect /-*nta*/.

3. Stems in -*n*(*a*)*C*-

/*ciš*-/ teach, /*cinas*-, *ciš*/ (-); 3 sg. inj. /*cinas*/ 44.6d, /*cizdi*/; YH /*cišmahi*/. /*ciš*-/ resulted from *cinš*-.

/*ciθ*-/ recognize, /*cinaθ*-/ (*cit*-?); 3 sg. inj. /*cinas*/ 32.5c.

/*marc*-/ destroy, /*mrnc*-/ (*mr̥c*-, -); 2 pl. M. /*mrngdvai*/, 3 pl. /*mrncatai*/, opt. /*mrnšyāt*/ with *cy* > *šy*, inf. /*mrngdyāi*/.

/*marz*-/ destroy, /*mrnž*-/ (-); inf. /*mrnždyāi*/.

/*miz*-/ ?, /*minaz*-, *miz*/ (-); 2 sg. /*minaš*, *mizan*/.

/*vid*-/ find, /*vinad*-/ (*vid*-, cf. *vindáti*); /*vinasti*/.

4. Stems of these types have been thematized:

/*mrnda*-/ neglect, from /*mrd*-/.

/*prna*-/ fill, from /*par*-/, for *pr*-*n*-*aH*-.

/*z*(*a*)*rna*-/ make, be angry, from /*zar*-/, for *zr*-*n*-*aH*. Opt. /*z*(*a*)*rnaima*/. The form is written *zaran*-, which makes the verse one syllable too long. -*ara*- may be due to influence of other forms (influencing *zara*-), or stand for -*ara*- with -*ar*- from -*r̥H*- before consonant secondarily introduced.

Nasal presents (all forms)

Active		-nu-	-nā-	-naC-
ind.	3.		hunāti	vinasti
	1.		huʔanmahi YH,	cišmahi YH
			friʔanmahi YH	
	2.	spašnuθa		
inj.	2.			minaš
	3.	cinaut		cinas, cinas
	2.	db(a)nauta		
	3.			mizan
sub.	3.	krnavan		
opt.	3.			mrnšyāt
imp.	2.			ciždi
	2.		zānta	
ptc.		cinvant-,		
		srnvant- YH		

Middle				
ind.	1.		vrnai	
	3.		vrntai	
	2.			mrngdvai
	3.			mrncatai
inj.	3. pl.		vrnata	
sub.	1		frīnāi	
	3.	vrnavatai		
inf.				mrngdyāi,
				mrnždyāi
ptc.			(frīnamna-)	

8. The thematic present

Stems

1. Root presents
1a. Full grade of the root
/arja-/ be worth (árhati)
/ava-/ help (ávati)
/bara-/ bear (bhárati)
/bauda-/ be aware (bódhati)
/bava-/ be (bhávati)
/dava-/? '?' (?)
/dakša-/ reveal (-)

/dbanza-/ consolidate, support (*baṃhate?*)
/dvăra-/ *dvāra-* hurry (-)
/frāda-/ increase, further (-)
/haca-/ follow (*sácate*)
/hvăra-/ *xᵛāra-* take an oath? (-)
/mara-/ recite, keep in mind (*smárati*)
/mrauca-/ sink (*mrócati*)
/nada-/ cry (*nádati*)
/rapa-/ support (*rápati*)
/sanha-/ announce (*śáṃsati*)
/sāra-/ *sāra-* unite (-)
/šyava-/ activate (*cyávati*)
/θvaya-/ frighten (-)
/vada-/ carry, lead? (-)
/vaida-/ find (-)
/vana-/ overcome (*vánati*)
/văpa-/ *vāpa-* scatter, snatch away, cut down (*vápati*)
/varda-/ grow (*várdhati*)
/vaižda-/ lift, raise (*vīḍayati*)
/xrausa-/ scream (*króśati*)
/yaza-/ adore (*yájati*)

It is not known why some forms have a long *ā*; it may be only graphic.

1b. Zero grade of the root
/iša-/ set going (*iṣe*)
/mržda-/ be merciful (-)
/sprza-/ strive (*spṛháyati*)
/visa-/ be prepared (*viśáti*)

With reduplication
/īra-/ rise (imf. *áirat*); /īratu/ 53.8d.
/xšta-/ stand, from *hišta-*

2. Original nasal presents
a. With roots in stop
/mṛnda-/ destroy (*márdate*)
b. With roots in laryngeal
/frīna-/ dedicate oneself; please (*pṛṇā́ti*)
/pṛna-/ fill (*pṛṇā́ti*)
/zarna-/ be angry (*hṛṇīté*)

3. With suffix -ya-
a. With zero grade of the root
/dīvya-/ endeavour? (*dīvyati?*)

/drujya-/ deceive (drúhyati), in /adrujyant-/
/dbiṣya-/ be at enmity (dviṣ-)
/dya-/ distribute (dyáti)
/dya-/ bind (dyáti)
/iṣya-/ urge (íṣyati)
/kāya-/ desire (kā́ya-)
/manya-/ think (mányate)
/piṣya-/ ?
/siẓdya-/ retreat (-)
/sya-/ cut (chyáti)
/uƒya-/ sing, eulogize (-)
/uxṣya-/ grow (ukṣá-, úkṣa-)
/vaṣya-/ totter (root vanc-), see 12.1.
/vṛzya-/ work (-)
b. With full grade of the root
/ansya-/ attain (-)
/nasya-/ disappear (náśyati)
/saṣya-/ learn (śaknóti)
/spasya-/ look, perceive (páśyati)
/θrāya-/ protect (trā́yate)
With reduplication
/īzya-/ desire, *Hi-HHĝh-, root āz- (ī́hate).
For the denominatives with -ya- see §14.

4. Suffix -aya-
a. with zero grade
/iṣaya-/ prosper (iṣáyati); ptc. /iṣayant-/ 50.9d.
/rudaya-/ lament, root rud- id. (rodáyati); 3 sg M /rudayata/ 44.20d
/rupaya-/ cause pain ?, rup- break (ropayati); /rupayanti/ 48.10c.

If the u of these verbs is really long, as the spelling indicates, it must be analogical. The second verb seems to have causative meaning, but the interpretation is uncertain.
From roots in -ā
/xṣaya-/ rule, xṣā- id. (kṣáyati); /xṣayahi/ etc.
/zaya-/ win, from *zH-aya-, zā- id.; /zayaθa/ 53.7d. (Or sub. aor. of zi-.)
/zuʔaya-/ call, from *zuH-aya- < *ĝhuH-ei̯o-, root zū- id. (hváyati); 1 sg /zuʔayā/, /zuʔayantai/ ptc. dat. sg.
b. with full grade. This had PIE o, which gave ā when Brugmann's Law operated. The long vowel has been introduced in all roots ending in one consonant except /savaya-/. Many verbs have causative meaning, and it is the normal way in which causatives were formed, but others·have·at·
most an intensive meaning, and in some cases it is not clear.

b1. causatives

/bānaya-/ make ill, *ban-* fall ill (-); /bānayan/.

/mānaya-/ resemble (< make one think of), *man-* think (*mānáyati*); /mānayati/ 49.2a.

/saucaya-/ kindle, *suc-* burn (*śocáyati*); /saucayat/ 32.14c.

/srāvaya-/ make heard, *sru-* hear (*śraváyati*); opt. /srāvayaima/ 49.6c.

/-uxšaya-/ make grow, *uxš-/vaxš-* (*ukṣáyati*); in /arta-ʔuxšayant-/ 33.9a.

/vardaya-/ cause to grow, *vṛd-* grow (*vardháyati*); opt. M. /vardayaita/ 50.3c

YH /vātaya-/ inspire, *vat-* understand (*vātáyati*); /vātayāmahi/ 35.7, /vātayatu/ 35.6.

YH /vaidaya-/ make known, *vid-* know (*vedáyati*); /vaidayāmahi) 36.6, 41.1.

b2 non-causatives

/dābaya-/ deceive, *dab-* id. (cs. *dambháyati*); /dābayati/ 43.6e.

/dāraya-/ hold, *dar-* id. (*dhāráyati*); /dārayah/ 32.1c, /dārayat/ 31.7b.

/daxšaya-/ teach, *daxš-* id.(-); /daxšaya/ 33.13c.

/dbāvaya-/ delude, *dbu-* id. (-); /dbāvayat/ 31.17b.

/rāhaya-/ alienate, *rah-* id. (-); /rāhayan/ 32.12a.

/rāšaya-/ damage, *raš-* id. (-); inf. /rāšayahai/ 49.3b, 51,9c.

/savaya-/ save, *sū-* id. (-); /savayah/ 51.9c.

/varzaya-/ be effective, *vrz-* work (-); /varzayantah/ 45.4c. The form has also been considered as a denominative.

5. Suffix -sa-

a. -sa- from *-so-

/baxša-/ distribute, *baj-* (-); imp. /baxšahva/ 33.10b.

/mazdāha-/ bear in mind (-); imp. /mazdāhadvam/ 45.1c.

/xšnauša-/ satisfy; /xšnaušamnah/ 46.18d.

b. desideratives

See §13.2.

c. -sa- from *-ske/o-, with zero grade of the root except those ending in -ā.

/isa-/ desire, *iš-* (*iccháti*); /isaya/ 1s opt. M. 43.8b.

/jasa-/ go, root *gam-* (*gácchati*)

/išsa-/ seek, *ižd-* (-):

/nṛfsa-/ wane, *nṛp-* (-).

/pṛsa-/ ask, *pṛs-* (*pṛccháti*).

/yasa-/ hold, *yam-* (*yácchati*).

/yāsa-/ long for, *yā-* (-).

6. Suffix -va-

/jīva-/ live, *jī-* (*jívati*).

/raiθva-/ pervade?, *riθ-* (-).

See under 8.

7. -va-ya- is found in

/tarvaya-/ overcome, root *ṭ̄-*; /tarvayāma/ 28.6c. The form is often considered a Late Avestan intrusion, for *tarva-, Skt. *tū́rvati*, because the verse is one syllable too long.

8. Quite isolated is

/vaina-/ see (*vénati*).

Thematic presents, active (examples)

ind.	1.	/-āmi/	avāmi
		/-ā/	īzyā, ufyā, prsā
	2.	/-ahi/	vainahi, θvayahi, xšayahi
	3.	/-ati/	barati, sanhati, nrfsati, uxšyati
	1.	/-āmahi/	sanhāmahi, jīvāmahi, YH vātayāmahi
	2.	/-aθa/	išaθa, sašyaθa
	3.	/-anti/	maranti, YH vananti
inj.	1.		
	2.	/-ah/	jasah, uxšyah, didržah
	3.	/-at/	arjat, mṛdat, prsat, jasat, dārayat
	1.	/-āma/	tarvayāma[1]
	2.		
	3.	/-an/	mṛndan, vardan, bānayan
sub.	1.	/aʔāni/	sanhaʔāni; ufyāni ?[2]
		/-aʔā/	xšayaʔā
	2.		
	3.	/-aʔat/	išaʔat
	1.		
	2.		
	3.	/-aʔanti/	išaʔanti
		/-aʔan/	raʔršyaʔan, YH vrzyaʔan[3]
opt.	1.		
	2.	/-aiš/	rapaiš
	3.	/-ait/	frādait, jasait, išsait, vādayait
	1.	/-aima/	vanaima, zarnaima,
	2.		
	3.		
imp.	2.	/-a/	rapa, vaina, prsa, uxšya, xšaya
	3.	/-atu/	īratu, YH vrzyatu-, vātayatu
	2.	/-ata/	vainata, jasata/
	3.	/-antu/	

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[1] see supra section 8
[2] see under the subjunctive, §5
[3] in the YH it cannot be verified if it was -aʔa- or -ā-.

Thematic presents, middle (examples).

ind.	1.	/-ai/	īsai?, yasai
	2.		
	3.	/-atai/	hacatai, yazatai, prsatai, manyatai
	1.	/-āmadai/	YH yazāmadai, hišcāmadai, visāmadai[1]
	2.	/-advai/	didragžadvai
	3.	/-antai/	hacantai, frādantai
inj.	1.		
	2.		
	3.	/-ata/	didaršata, manyata
	1.		
	2.		
	3.	/-anta/	dvaranta, manyanta
	3 du	/-aitam/	jasaitam
sub	1.	/-aʔāi/[2]	šyavaʔāi, prsaʔāi, manyaʔāi
		/-aʔānai/	
	2.		
	3.		
	1.	/-aʔāmadai/	YH is(aʔ)āmadai[3]
	2.		
	3.	/-aʔantai/	hacaʔantai
opt.	1.	/-aya/	īsaya
	2.		
	3.	/-aita/	vardayaita
	1.		
	2.		
	3.		
imp.	2.	/-ahva/	baxšahva
	3.	/-atām/	vrzyatām, dyatām
	2.	/-advam/	vaidadvam
	3.	/antām/	xrausantām

---

[1] all these forms are written with short a.
[2] on the forms with /-āi/ see on the subjunctive.
[3] /aʔā/ or /ā/ cannot be verified.

9. The aorist

91. The root aorist

Thirty five roots have a root aorist. The roots in -*ā* are treated in a separate section.

Ablaut

The singular indicative/injunctive active and the subjunctive active and middle (with the exception of /*buua*-/, Skt. *bhuua*-) have full grade, the other forms zero grade. The 1. and 2. pl. indicative active have often full grade in Sanskrit. In Gathic only one form is known, /*ą̄sta*/, but it is now mostly interpreted as 3 sg. M. The only other relevant form is /*caišta*/, for which it is not evident that it is a 2 pl.

The root *gam*- has /*jam*-/ in the optative, which is the normal development of *ṃ̇ before *y* (cf. above). (Phonetically we would expect *gamyā-*. The introduction of *j-* is not evident: mostly Avestan preserves the regular phonetic form. It might have followed the subjunctive.)

The optative has a few full grade forms. They were discussed in §6. A problem is /*ciθīt*/ for expected */*caiθīt*/ or */*ciθyāt*/.

The imperative has some full grade forms, as in Sanskrit. The Gathic material allows no conclusions, but that /*gadi*/ : /*jantu*/ must be old. The full grade forms of *sru*- have exact counterparts in Sanskrit: /*srautu*/ - *śrótu*, /*srauta*/ - *śróta*.

/*uar*-/ in middle forms represents *ṷ̣*H*-.

/*manīmadi*/ YH may have analogically introduced *man*-, to avoid *mnīmadi*.

In /*aršua*/, written *āraš̆uā*, the full grade must be analogical (cf. Skt. opt. M *arīta*). It is also found in Sanskrit.

k : *c* and *g* : *j* have been mostly preserved in their original position, whereas Sanskrit generalized the non-palatalized form. /*cart*/, /*cara*-/ (root *kr*-) and /*jan, jama*-/ (*gam*-) show that the root had *e*-vocalism, /*yujan*/ that the ending was *-*ent*. In the thematic inflection the palatalized form has been generalized (type *sácate*), hence 1 sg. sub. /*yaujā*/. On the opt. /*jamyā*-/ see above.

Stems

The roots that have a root aorist are:

CaC		CaCC	
ah-		*syazd-*	(*sižd-*)
hac-		*vaxš-*	
nas-	attain		
vac-			
grab-			
xrap-	YH		

Ca?	*da?-, ga?-, za?-*	*CāC*	*rād-*
CaR	*ar-*	*CaRC*	*ard-*
	dar-		*dars*
	kar-		*grab-*
	var- lock		*mard-*
	var- choose		*varz-* YH
CaN	*gam-*	*CaNC*	*sanh-*
	yam-		
	*man-*YH		
Ci	*cī-*	*CiC*	*ciš-*
	zī-		*ciθ-*
			miθ-
Cu	*sru-*	*CuC*	*guš-*
			yuj-
			xrud-
Cu?	*bu?-*		

/ah-/ throw, /ah-/ (-); /as, ahat/. Cf. §2.

/ar-/ rise, /ar-/ (r̥-, arta/); /aram, arantai, aršva/ (all written with ār-).

/ard-/ flourish, /ard-/ (r̥dh-, r̥dhát); /ardat/.

/bu?-/ be, /bu?-/ (bhū-, ábhūt); /buvat(i), buvanti, YH buyāma/.

/ci-/ separate, /cay-, šy-/ (-); 3 pl. inj. M. /šyata/, sub. /cayaθa/.

/ciš-/ promise, /caiš-/ (-); /caišam, caiš, caišt, caišta/. That /caišta/ is 2 pl. A. is not clear from the text.

/ciθ-/ erkennen, /caiθ-, ciθ-/ (-); /(a)cista, caiθat, caiθatai, ciθīt?/. It has been objected that we expect *caiθīt, but such 'incorrect' reshufflings do occur: instead of a 'correct' analogical *ciθyāt a form /ciθīt/ may have arisen.

/dar-/ hold, /dr-/ (dh̥r-, dhr̥thás); /drta, drīta/.

/dars-/ see, /dars-/ (dr̥š-, ádaršam); /darsam, adarsam, darsāni/.

/gam-/ go, /gam-, jam-, gm-/ (gam-, ágan); /jan, gman/, sub. /jama-/, opt. /jamyā-/, /gadi, jantu/ (see paradigm).

/grab-/ grasp, /grab-/ (grabh-; ágrabham); /grabam/.

/guš-/ hear, /guš-/ (ghus-, -); inj. M. /gušta/.

/hac-/ follow, /hac, sc-/ (sac-, sacāna-); /scantu/.

/kar-/ make, /car-, kr-/ (kr̥-, ákar); /cart, carāni, carat(i)/, YH /kršva/.

/man-/ think, /man-/ (man-, ámata); 2, 3 sg. inj. M. /manha, manta/, sub. /manāi/, opt. /manīmadi/.

/mard-/ neglect, /mard-/ (mr̥dh-, mr̥dhyás); /mardati/.

/miθ-/ rob, /maiθ-, miθ-/ (-); /maist, maiθat, miθyāt/.

/nas-/ attain, /nas-, as-/ (as-, āṣṭa, asyāt); sub. */nasat/ written nạsat with
    unexplained ạ; /asyāt/ in frosyāt̲; 3 sg. inj. M. /asta/ in frạstā with
    unexplained ạ.

/rād-/ accomplish, /rād-/ (rādh-, sub. rādhat); sub. /rādat, rādanti/.

/sanh-/ announce, /sah-/ (śaṁs-, -); /sahyāt/.

/sižd-/ retreat, /syazd-/ (-); sub. /syazdat/.

/sru-/hear, /srav-, sru-/ (śru-, áśrot); /sravīma, srautu, srauta, asru(ž)dvam/,
    3 du. /asruvātam/. The -ž- must be from the enlarged root /sruš-/.

/vac-/ speak, /uc-/ (vac-, -); 3 sg. imp. M. /ucām/.

/var-/ choose, /var-/ (vr̥̊-, ávr̥ta); /varta, varmadi/.

/var-/ lock in, ward off, /var-/ (vr̥̊-, ávar); /varāni, varšva?/.

/varz-/ work, /varz-/ (-); 2 sg. inj. YH /varš, varzīma/.

/vaxš-/ grow, /vaxš-, uxš-?/ (ukṣ-, -); /vaxšt, vaxšat, vaxšantai/; /uxšiꝑa/ 1
    sg. opt M. in uxšyā 33.10c?

/xrap-/ be adequate, /xrap-/ (kr̥p-?, ákr̥pran); /xrapati/ YH.

/xrud-/ make afraid, /xraud-/ (krudh-, -); /xraudat(ī)/.

/yam-/ hold, /yam-/ (yam-, sub. yámat); 3 sg. M. /yanta/, /yamatai/.

/yuj-/ yoke, /yaug-, yug-/ (yuj-, áyuji); /yaugt, yujan, yaujā, yaujantai/.

/zi-/ abandon, /zay-/ (-); sub. /zayaθa/. (Or present from zā-, *zHaya-.)

Inflection

Root aorist, active (examples)

    ind./inj.

1.				caišam
2.				caiš
3.	jan	yaugt	maist	caišt
2.				caišta?
3.	gman	yujan		

    sub.

1.	jamā	yaujā			darsāni
3.	jamat(ī)		maiθat	caiθat	
2.					cayaθa
3.	jaman				rādanti

    opt.

2.	jamyāh YH			
3.	jamyāt	miθyāt	ciθīt?	
1.	jamyāma			sravīma

    imp.

2.	gadi	
3.	jantu	
2.		srauta
3.		scantu

In the first table the active forms of four verbs are given to show the ablaut, with in the fifth column examples of all the other forms found in Gathic. The second tabel gives all forms attested in Gathic. The third table gives all middle forms.

Note 3 pl. M. /šy-ata/. This is the normal ending in Vedic too. It contradicts Act. /-an/. Vedic has *ákrata* against *kránta*, which suggests that the zero grade was caused by the augment. Why this form was generalized, even in Avestan where the augment was rare, is not clear.

Root aorists, active (all forms)
ind./inj.
1.   *aram, caišam, (a)darsam, grabam*
2.   *as, caiš varš* YH
3.   *cart, caišt, jan, maist, vaxšt, yaugt*
1.
2.   *caišta?*
3.   *gman, yujan*
sub.
1.   *carāni, darsāni, jamā, varāni, yaujā*
2.
3.   *ardat, ahat, buvat(ī), caiθat, carat(ī), darsat, jamat(ī), maiθat, mardati, *nasat, rādat, syazdat, xrapati, xraudat(ī)*
1.
2.   *cayaθa, zayaθa?*
3.   *buvanti, jaman, rādanti*
opt.
1.
2.   *jamyāh*
3.   *asyāt, jamyāt, miθyāt, sahyāt, ciθīt?*
1.   *buyāma* YH, *jamyāma, sravīma, varzīma* YH
2.
3.
imp.
2.   *gadi*
3.   *jantu, srautu*
2.   *srauta*
3.   *scantu*

Root aorist, middle (all forms)

  ind./inj.

   1.

   2. *manha* YH

   3. *(a)cista, drta, manta gušta, varta, yanta*

   3. du. *[a]sruvātam*

   1. *varmadi*

   2. *[a]sru(ž)dvam*

   3. *šyata*

  sub.

   1. *manāi*

   2.

   3. *caiθatai, yamatai*

   3. du. *jamaitai*

   1.

   2.

   3. *arantai, yaujantai, vaxšantai*

  opt.

   1. *uxšiᴣa* ?

   2.

   3. *drīta*

   1. *manīmadi* YH

   2.

   3.

  imp.

   2. *aršva, kršva* YH, *varšva*?

   3. *ucām*

91.1 *Root aorists of roots in -aᴣ*

The aorists of roots in *-aᴣ* present special problems because of the final laryngeal.

Stems

There are three roots: /daᴣ-/, /gaᴣ-/, YH /zaᴣ-/.
/daᴣ-/ give, put, /dā-, daᴣ-, d-/; see paradigm, with the Sanskrit forms.
/gaᴣ-/ go, /gaᴣ-/ (gā-, gắt); /gaᴣat/.
/zaᴣ-/ win, /zaᴣ-/ (hā-, -); YH /za(ᴣ)īma/.

Inflection

Active

Ind./inj. Avestan has full grade in 1 and 2 pl., as has Sanskrit. (These could be independant innovations.) In the 3 pl. Skt. *-ur* replaces *-n̥t*, but Avestan has replaced */dan/ < *dH-ent* by */dān/.

Sub. All forms have /-aʔ-/.

Opt. /dyaʔam/ from *-yaH-am*. YH /zaima/ represents *zaH-iH-ma*, with full grade (still pronounced /zaʔīma/?); see on the opt., §6.

Middle

Ind./inj. Avestan generalized the full grade in the singular (to avoid *tsa* > *sa*, *dta* > *sta*?). 3 pl. *data* < *dH-n̥to* (as opposed to /-an/ in the active; cf. §91). The 1 du. /dvadi/ also has zero grade.

Sub. Full grade. Note /daʔadvai/ written *daduyē*.

Opt. Zero grade *dH-iH-a*, *dH-iH-sa*.

Imp. Avestan introduced the full grade.

In general Avestan introduced the full grade in those cases where the zero grade (with *ø < H*) would have given a quite irregular form.

Root aorist of roots in -aʔ (all forms)

	Active	Middle	Sanskrit Active	Middle
ind./inj.				
1.			*adhām*	(*ádi*)
2.	*dāh*	*dāha*	*adhās*	*adhithās*
3.	*dāt*	*dāta*	*adhāt*	*adhita*
1 du.		*dvadi*		
1.	*dāma*		(*asthāma*)	*dhīmahi*
2.	*dāta*		(*sthāta*)	
3.	*dān*	*data*	*adhur*	
sub.				
1.		*daʔānai*		
2.	*daʔahi*	*daʔahai/dāhai* YH	*dhās*	
3.	*daʔat gaʔat*		*dhāt*	
	daʔati	*daʔatai*	*dhāti*	
1.	*daʔāma?*		*dhāma*	*dhāmahe*
2.		*daʔadvai*		
3.	*daʔan*	*daʔantai*		

opt.

1.	dya?am	di?a	dheyám	
2.		dīša		
3.	dyāt, dāyāt			
1.	za(?)īma YH			
2.				
3.		•	dheyúr	

imp.

2.	dādi	dāhva		dhiṣvá
3.	dātu	da?ām	dhātu	
2.	dāta		dhāta	
3.			dhāntu	

92. The thematic aorist

Stems

The roots are in zero grade. From *āp-* the aorist is written *apa-*, which must be a later shortening. (*āp-* results from *HaHp-*; zero grade *HHp-* would have given **p-* in Indo-Iranian.) From *taš-* we find /taš-a-/, to avoid a consonant cluster. The stem /hana-/ continues *snH-a-*.

/āp-/ obtain, /āpa-/ (āp-, ápat); /āpaima/ YH.

/guš-/ hear, /guša-/ (ghuṣ-, -); 3 sg. inj. M. /gušata/, /gušahva, gušadvam/.

/han-/ win, /hana-/ (sana-); /hana?āni/, YH /hanaima/.

/par-/ cross, /fra-/ (pr̥-, -); sub. /fra?ā/.

/sāh-/ teach, /siša-/ (śās-, śiṣa-); /sišait, siša/.

/taš-/ shape, /taša-/ (takṣ-, tákṣa-); /tašah, tašat/.

/xsā-/ observe, /xsa-/ (-); /xsah, xsa?āi/.

/xšā/ rule, /xša-/ (kṣā-, -); /xšanta/, YH /xšaita/, imp. /xšantām/.

/²vid-/ find, /vida-/ (vid-, vida-/); /vidah, vidat, vida/.

/³vid-/ or /vi-da?-/ satisfy, /vida-/ (vidh-, vidha-); /vida?at(i)/.

   Reduplicated roots:

/²nas-/ disappear, /nansa-/ (naś-, nī́naśat, neśat); /anansat, nansat/.

/vac-/ say, /vauca-/ (vac-, voca-); YH /vaucas-/, /vaucat/, YH /avaucāma/, /vauca?ā-, vauca?at/, YH /vauc(a?)āma, vaucaima/, /vauca/.

/var-/ turn, /vavra-/ (-); /vavra?atai, vavraya, vavraimadi/. Uncertain.

Inflection

All forms are given in the table. The inflection is the normal thematic one.

Thematic aorist (all forms)

	Active	Middle
ind./inj.		
1.		
2.	*tašah, xsah, vidah,* YH *vaucas-*	
3.	*tašat, vidat, (a)nansat, vaucat*	*gušata*
1.	*avaucāma* YH	
2.		
3.		*xšanta*
sub.		
1.	*fraʔā, hanaʔāni, vaucaʔā-*	*xsaʔāi*
2.		
3.	*vidaʔat(i), vaucaʔat*	*vavraʔatai*
1.	*vauc(aʔ)āma* YH	
2.		
3.		
opt.		
1.		*vavraya*
2.		
3.	*sišait*	*xšaita* YH
1.	*āpaima* YH, *hanaima* YH, *vaucaima-* YH	*vavraimadi*
2.		
3.		
imp.		
2.	*siša, vida, vauca*	*gušahva*
3.		
2.		*gušadvam*
3.		*xšantām*

93. The s-aorist

Avestan does not have *iš*-aorists, because the laryngeal was not vocalized here. The only disyllabic root from which Gathic has an *s*-aorist is /van-/, but this has an *s*-aorist (not an *iš*-aorist) in Sanskrit too. There is no *sa*-aorist either.

Stems

All forms have lengthened grade in the ind.-inj. active, full grade else-where. For the plural ind./inj./imp. there are two forms, where the long *ā* is not reliable. Gathic is here slightly more archaic than Vedic, where a few middle zero forms were created. On the origin of this ablaut see on the static inflection, 71a.

It seems most useful to group the roots according to their final conso-
nant. The -s of the stem is often changed into -š. Thus we find before con-
sonant s/z, š/ž; before vowel s/z becomes h. The stems found are:

roots in		ind.-inj. Act.	other Act.	Middle
velar	/marc-/			/marxš-/
	/hac-/			/haxš-/
	/baj-/		/baxš-/	/baxš-/
	/vraj-/	/vrāxš-/	/vraxš-/[1]	
dent.	/rud-/			/raus-/
	/sand-/	/sāns-/[2]		/sans-/[2]
sibil.	/dis-/	/dāiš-/	/daiš-/	
	/fras-/			/fraš-/
	/iš-/	/āiš-/		
	/nas-/		/naš-/[3]	
	/θvars-/			/θvarž-/
	/varz-/		/varš-/	/varš-/
-r	/dar-/	/dārš-/		
	/sar-/			/sarš-/[4]
-nasal	/gam-/		/janh-/	
	/man-/			/mans-, manh-/
	/van-/	/vāns-/[5]	/vanh-/	
-i(?)	/ni?-/		/naiš-/	
-u	/sru-/			/srauš-/
	/θru-/			/θrauš-/
	/xšnu-/	/xšnāuš-/	/xšnauš-/	/xšnauš-/
-a?	/ra?-/			/rāh-/
	/sa?-/			/sās-/
	/sta?-/		/stāh-/	
	/θra?-/			/θrās-/

1. Roots in velar (stem in -xš-)

/marc-/ destroy, /marxš-/ (mr̥c-, mr̥kṣiṣṭa); sub. /marxšatai/. Isolated sa-
subjunctive.

/hac-/ follow, /haxš-/ (sac-, sakṣat); /haxšāi/.

/baj-/ distribute, /baxš-/ (bhaj-, abhakta, bhakṣat); /baxšati/ (or thematic pres-
ent), baxšta/.

/vraj-/ walk, /vrāxš-, vraxš-/ (vraj(i)-, avrājīt); 3 pl. inj. /vrāxšat/, 3 sg. sub.
/vraxšat/. The latter form is written with ā, which may be graphic (after
v) or influenced by the injunctive.

1) written with long ā, urvāxš- 2) written sqs- 3) written naš- 4) written sāraš- 5) writ-
ten vqs-

2. Roots in dental (stem in -s, -z)

/rud-/ lament, /raus-/ (rud-, -); 3 sg. M. /rausta/.

/sand-/ seem, /sāns-/ (chand-, achān, áchānta); 2, 3 sg. inj /sāns, sāns/, 2 pl.
imp. /sansta/.

/vid-/ know/find, /vais-/? (-); imp. /vaizdvam/; cf. inf. /vaizdyāi/; also taken
as perfect, but /vaida/ never has middle endings.

3. Root in sibilant (s, z < PIE *k̑, *g̑(h); stem in -š)

/dis-/ show, /dāiš-, daiš-/ (diś-, adikṣi); 2 sg. inj. /dāiš/, sub. /daišā/, imp.
/daiši/.

/fras-/ ask, /fraš-/ (praś-, áprākṣam); /fraši, frašta, frašva/.

/¹nas-/ attain, /năš-/ (-); sub. /našāma/, written năš-.

/θvars-/ shape, /θvarš-/ (-); /θvarždvam/.

/varz-/ work, /varš/ (-); /varšā, varšati, varšanti, varšānai, varšatai/. Isolated
sa-subjunctive.

/iš-/ arrive, /āiš-/? (-); 2, 3 sg. inj. /āiš/.

4. Roots in -r (stem in -rš)

/dar-/ hold, /dārš-/ (dhṛ-, -); /dāršt/. But see IV 821.

/sar-/ unite, /sarš-/ (-); 3 sg. M /saršta/. The ā in sārəšta will have been
taken from the present.

5. Roots in nasal (stem in -ans, -anh)

/gam-/ go, /janh-/ (gam-, agasmahi); /janhati/, an isolated sa-subjunctive.

/man-/ think, /mans-, manh-/ (man-, mamsi); /manhi, mansta, (a)mahmadi,
manhāi/. In /mahmadi/ the n of /manh-/ was dissimilated, cf. Skt.
agasmahi.

/van-/ overcome, /vāns, vanh-/ (van-, vamsat); 3 sg. /vāns/, /vanhat(i)/, YH
/vanhan/.

6. Roots in -i(?), -u (stem in -š)

/niɁ-/ lead, /naiš-/ (nī-, anaiṣam, néṣat); /naišat/, a sa-subjunctive.

/sru-/ hear, /srauš-/ (śru-, śroṣan); /sraušānai/. Isolated sa-subjunctive.

/θru-/ nourish, /θrauš-/ (-); 3 sg. inj. /θraušta/.

/xšnu-/ satisfy, /xšnāuš-, xšnauš-/ (-); 3 sg. /xšnāuš/, /xšnaušan, xšnaušāi/.
Note /xšnaušamna-/.

7. Roots in -aɁ (stem in -ās, -āz, -āh)

/raɁ-/ grant, /rās-/ (rā-, rāsat); /rāhahai/.

/saɁ-/ cut down, /sās-/ (chā-, -); /sāzdvam/.

/staɁ-/ stand, /stās-/ (sthā-,-); 3 sg. sub. /stāhat/. Isolated sa-subjunctive.

/θraɁ-/ protect, /θrās-/ (trā-, trāsva); /θrāzdvam/.

Inflection

All the forms found are given below.

The numbers of the different forms are (Vedic numbers in brackets):

	inj.	sub.	opt.	imp.
Active	9 (46)	14 (57)	0 (0)	2 (17)
Middle	10 (57)	8 (18)	0 (16)	4 (9)

The numbers agree remarkably with the Vedic ones. In the active there are more subjunctive than injunctive forms, which is due to the independant *sa-* subjunctives. There are slightly more middle than active injunctives, clearly more active than middle subjunctives. Gathic has no optatives at all, Sanskrit has only middle forms. It is possible that Gathic has the older situation. Imperatives are rare. The forms other than 2 sg. might be injunctives. In the 2 sg. active Sanskrit too has forms in *-si* (12; beside two in *-ā̆*).

s-aorist (all forms)

	Active	Middle
inj.		
1.		*fraši, manhi*
2.	*āiš? dāiš, sāns*	
3.	*āiš? dāršt, xšnāuš sāns, vāns*	*baxšta, frašta, mansta, rausta, saršta, θraušta*
1.		*(a)mahmadi*
2.		*θvaržduam*
3.	*vrāxšat*	
sub.		
1.	*daišā, varšā*	*haxšāi, manhāi, xšnaušāi, varšānai, sraušānai?*
2.		*rāhahai*
3.	*naišat, stāhat, vraxšat, vanhat, baxšati, janhati-, vanhati, varšati*	*marxšatai, varšatai*
1.	*našāma*	
2.		
3.	*xšnaušan, YH vanhan, varšanti*	
opt.		
	—	—
imp.		
2.	*daiši*	*frašva*
2.	*sansta*	*sāzduam, θrāzduam, vaizduam*

10. The perfect

We have perfect forms from 17 or 18 roots.

Reduplication

If the roots contains *i* or *u*, this is repeated, *cit-*: /ci-kaitrš/. But all roots (6) beginning with *v-* or *y-* have reduplication with *a*, /vrāz-/ : /vavrāz-/, /van-/ : /vaun-/, /yat-/ : /yait-/ < *ya-yt-. No forms of the type Skt. *uváca* occur.

Three or four forms have long *ā*. One or two of them follow *v*, so the length could be only graphic. The two others have Vedic parallels with *ā*.

Stems

The stems have full grade of the root in the singular indicative active and in the subjunctive, zero grade elsewhere. The full grade has long *ā* in 3 sg. /nanās-/ and /hišāy-/, which can be analogical from forms where Brugman's Law operated, but short in /tataš-/ which had a double consonant earlier, cf. Skt. *tatákṣa*. The 3 pl. /cikaitrš/ (*cikōitərəš*) has full grade instead of zero. It could be a static form, with root accent an full grade of the root in all forms. (Its -*ōi*- is also irregular, and its ending is unique in Avestan).

The stems are grouped according to their reduplication.

1. Reduplication with -*a*-
/da?-/ give, put, /dadā-/ (*d(h)ā-, dad(h)ātha*); /dadāθa/ YH.
/nas-/ disappear, /nanās-, nans-/ (*naš-, nanáša*); 3 sg. /nanāsa/, ptc. /nansvāh/.
/par-/ fill, /pafr-/ (*pṛ-, pupūryás, papṛvāṁs*); 3 sg. M. /pafrai/.
/taš-/ shape, /tataš-/ (*takṣ-, tatákṣa*); 3 sg. /tataša/.
/vrāz-/ be glad, /vavrāz/ (-); 2 pl. sub. /vavrāzaθa/.
/vac-/ say, /vauk-/ (*vac-, vaváca, uváca*); /vauxma/.
/van-/ overcome, /vaun-/ (*van-, vāvána*); /vaunar/ YH.
/yat-/ line up, /yait-/ (*yat-, yetire*); /yaiθma/.

2. Reduplication with -*ā*-
/dar-/ grasp, /dādr-/ (*dhṛ-, dādhára, dadhré*); 3 sg. M /dādrai/.
/kan-/ desire, /cāxn-/ (*kan-, cākánaι*); /cāxnar/.
/van-/ wish, /vāun-/ (-); ptc. /vāunuš/? Perhaps rather an adjective /vanu-/.
/varz-/ work, /vāvrz-/ (-); 3 sg. M /vāvrzai/, ptc. /vāvrzāna-/.

3. Reduplication with -*i*-
/cit-/ think, /cikait-/ (*cit-, cikéta*); /cikaitrš/.
/hi-/ bind, /hišāy-/ (*si-, sišáya*); /hišāya/.

4. Roots with V-

/ad-/ say, /ād-/ from *Ha-Hd- (-); 1 sg /āda/ YH, /ādar/.

/ah-/ be, /āh-/ (as-, ā́sa); /āhar/.

/ar-/ rise, /ār-/ < *h₃e-h₃r- (īr-, -); 3 sg. M. /ārai/.

/āp-/ obtain, /āp-/ (from *Ha-HHp-) (āp-, ā́pitha); ptc. /āpāna-/ written ap-; Skt. āpāná-.

5. Unreduplicated

/vid-/ know, /vaid-, vid-/ (vid-, véda); /vaida, vaista, vaida/, sub. /vaidā/ in 48.9a?

6. A pluperfect?

/rud-/keep off, /ruraust/ 51.12b is by some scholars considered as a pluperfect, rather than an inj. pres.

Perfect (all forms)

        Active

        ind.

        1.   vaida, YH āda

        2.   vaista, YH dadāθa

        3.   vaida, tataša, nanāsa, hišāya

        1.   vauxma, yaiθma

        2.

        3.   ādar, āhar, cāxnar, YH vaunar
                cikaitrš

        sub.

        1.   vaidā?

        2.

        3.

        1.

        2.   vavrāzaθa

        3.

        opt.

        3.   vidyāt

        Middle

        ind.

        3.sg.   dādrai, pafrai, ārai, vāvrzai

11. Future

There are one or two future forms in Gathic:

/vaxšya-/ from /vac-/ (vakṣyáti); 1 sg. /vaxšyā/ 30.1a, 44.6b, 45.1-6a, 46.15a, 51.8a.

/saušya-/ if future from /sū-/ save (Skt. sosyáti); ptc. /sauśyant-/. From
*sauH-sia-, but note that Sanskrit has a (recent) form without i < H.

They are made with the suffix -sya- and full grade of the root, as in
Sanskrit.

12. The passive

12.1 Passive presents

Passive presents are formed with -ya-. Only a few forms are found.
/barya-/ be carried, /bar-/ (bhriyáte); sub. /baryaʔantai/ 32.15c.
/sruya-/ be heard of, be famous, /sru-/ (śrūyáte); 1 sg. M /sruyai/ 33.7b.
/vašya-/ jump, /vanc-/ (vañc-); /vašyatai/ 44.11c.
/vazya-/ be carried = be married (-); /vazyamna-/ 53.5a.
One of these forms has full grade, whereas the Sanskrit forms have zero
grade (bhriyáte, ucyáte). This is an innovation of Iranian. All forms have
middle endings, as in Sanskrit, whereas in Late Avestan active endings
are as frequent as middle ones. The limited material does not allow the
conclusion that no active forms occurred.

12.2. The passive aorist

The passive aorist is formed exactly as in Sanskrit. There is only a 3 sg.
form. It had -o- in the root in PIE, which gave -ā- if Brugmann's Law
operated. Long vowel was sometimes introduced in roots ending in a
single consonant. The ending was -i.
The following forms occur:
/caiši/ from /ciš-/ promise; 51.15c.
/mravi/, written mraoī, from /mruʔ-/ speak (or from /mruʔ-/ maltreat ?);
    32.14c. The form has short -a- because it ended in a laryngeal:
    *mrauH-i.
/srāvi/ from /sru-/ hear; 32.7b.8a, 45.10b, 53.1a.
/(a)vāci/ from /vac-/ say; (36-6), 43.13e.

13.Derived conjugations

13.1. Causatives

The stems are given with the thematic presents, §5b1. The inflection is
that of the thematic presents.

13.2. Desideratives

Desideratives are made with the suffix -sa- after the reduplicated root:
The reduplicating vowel is always -i-, also when the root contains -u-
(/cixšnuša-/; LAv. has susruša-). The root has zero grade. (No root in -ā-

has a desiderative in Gathic.) Roots in *-r* have *-ar-*. This may have originated from *-ṛH-*, with *H* taken from the set roots. There is one root in a nasal, which has /vivanha-/ *vīvə̄ngha-*, which is mostly derived from **-vānsa-*. This would require the introduction of the nasal which is found in Sanskrit, e.g. *jigāṃsa-* (as against Skt. *vivāsa-* < **u̯i-u̯ṇH-so-*), but this could be a Sanskrit innovation. It is noteworthy that this root does not have the nasal in Sanskrit (*vivāsa-*). But *-ə̄ngha-* can represent **-ansa-*, and it seems possible that Avestan introduced the full grade which was also found — synchronically — in *-ar-*. There is a v.l. /vivahatu/ *vīvaŋhatu* from **u̯iu̯ṇso-*.

The reduplicating vowel is written long in some forms, short in others. No system has been found.

/cixšnuša-/ satisfy (-); 1 sg. ind. /cixšnušā/ 49.1b, nom. sg. /cixšnušah/ 32.8b, 43.15d, 45.9a.

/didarša-/ hold, anit root *dar-* (-); 3 sg. M inj. /didaršata/ 46.7b.

/didrža-/ hold, fast, **didrǧh-so-* (-); 2 sg. inj. /didržah/ 44.15d.

/didragža-/ consolidate, **di-drṇgh-so-* (-); 2 pl. ind. /didragžadvai/ 48.7b. Or /didrgža-/?

/dibža-/ deceive, **di-dbh-so-*, root *dabh-* (*dípsati*); inf. /dibžadyāi/ 45.4e.

/hissa-/ sit down, **si-sd-so-* (-); 3 sg. inj. /hissat/ 32.13a.

/īša-/ go, root *i-*, **Hi-Hi-so-* (*íṣati*); 2 pl. /īšaθa/ 45.1b, ptc. /īšantah/ 30.1a, 47.6d.

YH /jijīša-/ win?, root *ji-* (?*jígīšanti/ 39.1.

/mimagža-/ present with, glorify, **mi-mngh-so-* (-); nom. sg. /mimagžah/ 45.10a.

/vivarša-/ turn, root *var-* (-); nom. sg. /vivaršah/ 45.8a.

/vivǎnha-/ overcome, *van-* (*van(i)-*, *vivāsati*); /vivǎhatu/ 53.5d.

/vī.dišəmna-/ has been explained as a desiderative of *dā-* 'give' without reduplication (**di-dH-sa-* would have given Av. **disa-*), **dH-sa-* > *diša-*; cf. LAv. *vīdīsā-* 'liberality'.

All forms found are:

ind.	1.		/cixšnušā/	
	2.	pl.	/īšaθa/	/didragžadvai/
	3.		/jijīšanti/ YH	
inj.	2.	sg.	/didržah/	
	3.		/hissat/	/didaršata/
imp.	3.	sg.	/vivǎnhatu/	
inf.				/dibžadyāi/
ptc.			/īšantah/	
adi.			/mimagžah/	
			/cixšnušah/	
			/vivaršah/	

Note that there is an adjective in -a, of which some nominatives are found. It is equivalent to the Sanskrit adjective in -sú-.

13.3 The intensives

1. The athematic type

There are only three forms. They are formed, like the Sanskrit primary intensives, with strong reduplication and are inflected athematically. Avestan has neither -i- after the reduplicating syllable, nor after the stem, as is often found in Sanskrit, cf. /zauzaumi/ as against jóhavīti. This -i- is a vocalized laryngeal, but in Avestan a laryngeal was not vocalized in this position.

/dis-/ show, /daidais-/ (diś-, dédiṣṭe); /daidaišt/ 51.17a.

/vid-/ find, /vaivid-/ (vid-, vévid-); /vaividati/ or /-atai/ 30.8b, 3 pl. ind. or 3 sg. sub.; 1 sg. M /vaividai/ 44.11d.

/zuʔ-/ call, /zauzau-/ (hū-, jóhavīti); /zauzaumi/ 43.10a.

Indirect evidence gives /nainaistar-/ YH 35.2, from the stem *nai-naid- blame, revile.

2. The thematic type

There is only one form. It is formed, as in Sanskrit, with reduplication, zero grade of the root, and the suffix -ya-. It has active endings, whereas Sanskrit only has middle endings.

/rah-/ deflect, /raʔršya-/ (-); /raʔršyanti/, sub. /raʔršyaʔan/. (There is a noun from this root with (intensive) reduplication, /raʔrša-/.)

14. Denominatives

In the Gathas proper three to five denominatives are found, in the YH two or three more. This is a remarkably low figure. The Rigveda has more than a hundred of them, but is about twenty times as large. They are formed with -ya-. The suffix was accented, as in Sanskrit, as appears from the writing -xya- (see III 1). One of the three forms, however, has -hya-, and was therefore perhaps not accented on -ya-.

/fšuya-/ from /pasu-/, graze; 2 sg. inj. / fšuyah/ 48.5d; /fšuyant-/ farmer.

YH /išudya-/ from /išud-/, Labung darbringen; /išudyāmahi/ 36.5, 38.4, 39.4.

YH /namahyá-/ from /namah-/, adore; /namahyāmahi/ 36.5, 38.4, 39.4.

/yasahyá-/ attain glory, cf. Skt. yáśas-; /yasahyán/ 51.4b.

/sravahya-/ attain glory, from /sravah-/ (śravasyáti); /sravahyati/ 32.6a.

Doubtful are

YH /maikaya-/? from /*maika-/, drip?; /maikayant-/ 38.3. Mss. also have /maikant-/.

vādāyōit̰ 29.2c, which is uncertain.

/varzayantah/ 45.4c, cf. Skt. ūrjáyant-; others take it as a causative.

15. Non-finite verb forms
15.1 Participles

15.1a Present, aorist and future participles

Active The active participle in *-ant* shows ablaut in the athematic verbs, but not in the athematic verbs. Here Avestan differs from Sanskrit, where both types have ablaut. (The thematic locative plural has /-asu/ as in the athematic inflection, perhaps to avoid *-ansu < *-ant-su (though /-ans, -an/ and in Late Avestan -anbyo are tolerated).

Athematic forms have zero grade of the root or stem (/srnvant-/).

Reduplicated and static forms have invariable *-at-* < *-n̥t-*.

The feminine has /-antī-/ in the thematic, /-atī-/ in the athematic verbs. We find:

them.	/ham bavantīš/	acc. pl. YH	ath.	/hatīm/
	/maika(ya)ntīš/	,, ,,		/šyatībyah/

Forms in *-yant* are very frequent.

There are only two aorist forms (or even one: /dant-/ and /vi dant-/). A future is /saušyant-/ 'saviour'.

Middle. For the middle the thematic form is -amna- < *-omh₁no-. There is only one form in -āna- in the Gathas proper. Given the proportion active: middle in the thematic verbs, one might expect $15/24 \times 7 = 4,3$ athematic middle forms. This leads to the idea that -āna- was replaced by -amna- in Gathic. There are a few forms that suggest this: /xšnaušamna-/ beside an *s*-aorist (it is probably derived from the *sa*- subjunctive); /frinamna-/ stands beside athematic subj. /frināi/, but there are thematic forms in Late Avestan; /agžanvamna-/ has been compared with Skt. *kṣaṇuté*, but — if the connection is correct — it could be from thematic /gžanva-/; /isamna-/ 46.6a is taken from the root 'be able', but it has also been explained from 'desire'. There is, then, no certain evidence. The numbers are small, and -āna- might be absent accidentally. There is a perfect /āpāna-/, and in the YH /vāvrzāna-/. This confirms that -āna- existed in Gathic too. Late Avestan does have -āna-.

The corresponding Sanskrit forms are

Av.	-amna-	Skt.	amāna-
	-āna-		-āna-

Sanskrit probably made -amāna- by introducing the sequence -āna-. The interpretation of these forms has recently been found: the form that resulted in Av. -mna- after vowel, but in -āna- after consonant, is *-mHna-. This form also accounts for Gr. -o-menos < *-o-mh₁nos. (*-mHna- resulted in Stk. *-mina-, which is preserved in Prakrit.)

Middle forms are much less frequent than active forms, athematic forms much less frequent than the thematic ones. We find:

	active		middle		total
	pres.	aor.	pres.	aor.	
them.	25	0	15	0	40
ath.	7	2	0	0	9
total	34		15		49

Active presents: *thematic*

1. Presents in -*a*-
/buʔ-/ be: YH /ham bavantīš/ acc. pl. fem.
/bud-/ be aware: /baudantah/ nom. pl.
/fras-/ ask: /prsans/ nom. sg.
/iš-/ arrive: /išantah/ voc. pl. 30.1a, acc. pl. 47.6d.
/iš-/ urge: /išanti/ loc. sg. m. 46.9e. (Or 3 pl.)
/mar-/have in mind: /marantah/ nom. pl. m.
/mruc-/ sink: /mraucans/.
/nad-/ abuse: /nadantah/ acc. pl. m. 33.4c.
/rap-/ support: ntr. /rapan/, /rapantai/,.acc. pl. /rapantah/.

2. Presents in -(*a*)*ya*-
/druj-/ deceive: gen. /adrujyantah/.
/uxš-/ grow: gen. du. /rtaʔuxšayantāh/ 33.9a.
/dviš-/ be at enmity: /dvišyantai/.
/fšuya-/breed cattle: /fšuyantam, -antai, -asu/, nom. pl. /afšuyantah/.
/iš-/ prosper: /išayans/.
/maikaya-/? drip?, /maikayantīs/? YH 38.3.
/nas-/ disappear: nom. pl. /nasyantah/.
/piš-/ ? : /pišyasu/.
/xšā-/ rule: /xšayans/, nom. pl. /-antah/.
/yasahyá-/ attain glory: ntr. /yasahyán/.
/zuʔ-/ call: /zuʔayantai/.

3. Presents with -*sa*-
/ižd-/ implore: /iššans/.
/yā-/ ask for: /yāsans/.

4. Presents with -*va*-
/jī-/ live: /jīvans/, acc. pl. /jīvantah/.
/raiθ-/ pervade?: ntr. /raiθvan/.

Active presents: *athematic*

1. With -*ant*-/-*at*-
/ah-/ be: /hans, hata?am/, fem. /hatīm/.
/ci-/ separate: gen. sg. /cinvatah/.
/dav-/ ?: /davans/ 31.10c. Perhaps for /duvans/. May be thematic.
/i-/ go: /yantam/.
/sru-/ hear, stem /srnu-/: acc. pl. /srnvatas-/ YH.
/ši-/ dwell: /šyans/, dat. pl. f. /šyatībyah/.

2. With -*at*- only
/vispā-hišas/ nom. sg. m. of a reduplicated present (root unknown), e.g.
   **si-sH-n̥t-s*.
/stu-/ praise: /stavas/ nom. sg. m. from static **steu-n̥t-s*.

Active aorist: *athematic*

/da?-/ give, put: nom. pl. /dantah/ < **dH-ant-*, /vi dans/.

Active aorist: *thematic*

/han-/ win: /hanantai/.
/vid-/ satisfy: /vidans/.

Future

/saušyant-/ 'saviour', if fut. ptc. of /su?-/: /-ans/, gen. /-antah/, nom. pl.
   /-antah/, gen. pl. /-anta?am/.

Middle presents: *thematic*

1. Presents in -*a*-
/fras-/ ask: /prsamna-/.
/frī/ please: /frīnamna/.
/hac-/ follow: /hacamna-/.
/iš-/ desire, stem /isa-/: /isamna-/.
/sar-/ unite: /saramna-/.
/vad-/ carry: /vadamna-/.
/vid-/ find: /vaidamna-/.
/hvar-/ eat: /hvaramna-/.
/yaz-/ adore: /yazamna-/.

2. Presents in -(*a*)*ya*-
/syazd-/ retreat: /sizdyamna-/.
/vaz-/ carry: /vazyamna-/.
/vrz-/ work: /vrzyamna-/.
/xšā-/ rule: /xšayamna-/.

3. Presents with *-sa-*
/*vi dišamna-*/ 51.1b. Desiderative? See 13.2

4. Presents in *-va-*
/*agžanvamna-*/ 28.3b.

Middle aorists: s-aorist

/*xšnu-*/ satisfy: /*xšnaušamna-*/; the form is derived from a *sa*-subjunctive, 'who wants to satisfy'.

15.1b Perfect participles

There are only two active forms and two middle participles. The active forms have the suffix *-vas-/-us-*. On the middle form see above.

Active

/*vid-*/ know: /*vidvāh, vidušah, -ušai*/. On /*viduš*/ see VI 23.
/*nas-*/ disappear: /*nansvāh*/.
/*vaunuš*/ is rather an adjective /*vanu-*/.

Middle

/*āp-*/ obtain: /*āpāna-*/, written *ap-*.
/*varz-*/ work: /*vāvrzāna-*/ YH.

15.2 The verbal adjective

The verbal adjective in *-ta-* is well represented with over twenty different forms. The root has zero grade, except /*dā-*/ (cf. 91.1), /*taš-*/ and ?/*yap-*/.
   The adjective with *-na-* has only two examples.
1. With *-ta-*
/*ašta-*/ 51.12b (*nas-* reach).
/*dāta, nidāta-*/ (*dā-*).
/*dr̥šta-*/ in /*dr̥štaʔainah-*/, /*abidr̥šta-*/ (*drs-* see).
/*-gušta-, a-*/ (*guš-* hear).
/*-išta-, fra-, zastā-*/ (*iš-* urge).
/*išta-*/ YH 40.4 (*iš-* desire).
/*-krta-, han-, hu-*/ (*kar-* make).
/*-musta-, a-ham-*/? Uncertain.
/*rixta-*/ subst. remainder (*ric-* leave).
/*-sruta-, fra-*/ (*sru-* hear).
/*tašta-*/ (*taš-* shape).

/ušta-/ (vas- wish).

/-uxta-, fra-, hu-/ YH (vac- say).

/-vrta-, ā-/ (var- turn?).

/-vršta-, duž-, hu-/ (vrz- work).

/vista-, manavista-/ (vid- find).

/višta-/ in /Višta?aspa-/. On this form see IV 52.2.

- /xšusta-/ 'molten, liquid'.

/-yapta, ā-/? 'possession'.

/yuxta-/ (yuj- join).

/-zāta, kuda-/ YH (xšnā- be born).

2. With -na-

/prna-/ (prā- fill). The root form without laryngeal is analogical.

/ustāna-/ (tan- stretch out). From *tnH-na-.

15.3 The gerundives

A few forms in -i(?)a are gerundives.

/aujyaišu/ loc. pl. 46.12b 'praiseworthy'.

/iši?ā/ 48.8c 'which is to be sent'. Differently interpreted. The forms /iši?anh/ acc. pl. 32.16c and /iši?ām/ acc. sg. f. 51.17b may or may not be the same word.

/vaidi?ā/ 44.8d if 'which are to be acquired', from vid- 'find, acquire'. Variant vaēdyāi.

/vari?am/ 34.14a, 51.1a, /vari?āh/ 43.13e gen. sg. f. 'to be chosen'.

/zahi?ā/ 53.8b if 'risible' from zah-, Ved. has-. Uncertain.

/zavi?am/ 31.4a 'to be called'.

All forms but one have -ia-, which cannot be due to Sievers' law and thus point to -iHa-. In the Rigveda the gerundives mostly have disyllabic -ia-. For /aujya-/ a form with -i?a- seems excluded by the metre. Perhaps the word does not belong here.

15.4. The infinitive

The infinitives of the older Indo-European languages are in origin isolated case forms of verbal nouns. It is therefore not always easy to decide whether a form must be called an infinitive rather than a verbal noun (nor is the distinction very important). Two criteria seem adequate: 1. the ending, or the form as a whole, cannot be explained as a normal case form of a noun; and 2. the ending has been added to a verbal stem (not to a root).

In Avestan many forms have been called infinitives which can be better explained otherwise. Still there are several Gathic forms which are called infinitives by some scholars, whereas others explain them differently.

In Late Avestan there are only very few traces of infinitives (especially when *-tāē/-tayaē-ca* is not considered as an infinitive).

The Gathic forms found are (Vedic equivalents in brackets):

/-dyāi/	17	(-dhyai)	/-manai/?	1?	(-mane)
/-ah/	2	(-as?)	/-vai/	2	-
/-ai/?	1?	(-e)	/-vanai/	2	(-vane)
/-tai/	4	-			
/-hai̇, -sai/	6	(-se)			

The agreement with Vedic is not complete. The Vedic forms *-tum, -toḥ, -tave* are recent, so their absence presents no problem. There are also no equivalents of Ved. *-am, -aye, -ane,* and *-sani,* which are rather rare in Vedic too.

As PII *-dhyāi* is of PIE origin (cf. below), we can be sure that already in PIE a large number of case forms of verbal nouns were used with infinitival function. The process of rising and vanishing of such forms continued down to the separate languages.

/-dyāi/

17 infinitives have */-dyāi/*. These are:

/ʔar-/ rise: /uz-(ʔ)iʔrdyāi/ pres. (with red.) 43.12c, 14d. Late Avestan has mostly active forms from *ar + us.*

/būš-/ endeavour: /būždyāi/ 44.17d. The form can be a root present or a root aorist (but Vedic has no aorist). Ved. *bhū́ṣati* has only active forms, but the meaning can be middle.

/ci-/ distinguish: /cidyāi/ 31.5a, 49.6c. GAv. has a root aorist, with one active and one middle form. Middle interpretation well possible.

/dab-/ deceive: /dibžadyāi/ desid. 45.4e. Active (passive translation possible).

/dar-/ hold: /drdyāi/ 43.1d. *dar-* has a root aorist middle (and an *s-*aor. act).

/daʔ-/: /dādyāi/ 31.5b, 44.8b, 51.20a can be from the root aorist. As there is a specific present infinitive, interpretation as aorist is necessary. The first two instances have *māng,* with which finite forms are always middle. The third can be passive or middle. The form is only once written with long *-ā-* (44,8b), and in that place a disyllabic reading would be very welcome, but morphologically only /dādyāi/ is possible.

/daʔ-/: /dazdyāi/ 35.4, 44.1d pres. < *da-dH-. Passive or middle.

/jan-/ slay: /jadyāi/ 32.14c can be a present. (Vedic has no aorist.) Passive.

/marc-/ destroy: /mrngdyāi/ pres. 46,11b. Act. or middle?

/marz-/ destroy: /mrnždyāi/ pres. 44.14c. Act. or middle?

/¹nas-/ attain: /aždyāi/ 51;17c. There is a root aorist ans-/as-. Probably middle.

/sanh-/ announce: /sazdyāi/ 30.2c, 51.16c. There is a root aorist sas-. Probably middle.

/sru-/ hear: /srudyāi/ 34.12b, 45.5b, 46.13b,14b. There is a root aorist. Middle, 'to be heard'.

/suɁ-/ strengthen: /sūdyāi/ 44.2c, 49.3b. Avestan has no aorist. Probably passive.

/θraɁ-/ protect: /θrāyadyāi/ pres. 34.5b. All forms of θraɁ- are middle.

/vid-/ know/find: /vaizdyāi/ 43.13c. This form is taken from vid- '*know*', but this would be *vizdyāi (cf. /vidvai, vidvanai/), as all other roots have zero grade before /-dyāi/. It belongs clearly with 2 pl. /vaizdvam/, which must be an s-aorist of vid- 'find'. A root aorist would also give *vizdyāi, so it must be an s-aorist, (which has full grade in the middle forms). All forms of vais- and /vaida-/ (from vid-'find') are middle (as well as /vaivid-/, if we read /vaividatai/ in 30.8b).

/varz-/ work: /vrzyadyāi/ pres. 33.6b, 43.11e. Act. or middle?
We found the following situation:

present	act/med.	root	root pres./aor.[1]	act./med.
/uz-(Ɂ)iɁrdyāi/	act.?	/būždyāi/	?	act.?
/dazdyāi/	med.	/cidyai/	aor.	med?
/jadyāi/	med.	/drdyāi/	aor.	med.
/mrngdyāi/	?	/dādyāi/	aor.	med.?
/mrnždyāi/	?	/jadyāi/	pres.	med.
/θrāyadyāi/	med.	/aždyāi/	aor.	med.?
/vrzyadyāi/	?	/sazdyāi/	aor.	med.?
desid.		/srudyāi/	aor.	med.
/dibžadyāi/	act.	/sūdyāi/	?	med.
s-aor.				
/vaizdyāi/	med.			

There are seven forms from present stems and a desiderative (which is a present too). Of the nine root forms all but three have root aorists. One (/jadyāi/) is a root present. The two others cannot be ascertained (/būždyāi/ is probably a present). Certain is one s-aorist.

It is often difficult to decide between active and middle. For some forms there are reasons to consider them as active. It has been maintained that all forms were middle, as in Sanskrit (but for Sanskrit this has been doubted). An argument has been seen in the morphology: not only the roots, but also the presents have the ablaut form (zero grade) of the

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[1] Root present/aorist known in Gathic.
(Note that /jadyāi/ is listed twice.)

middle inflection. But this is perhaps not decisive. Confirmation has been found in the Umbrian forms in *-fi*, which are (present and) medio-passive.

Late Avestan has only a few forms. Vedic has *-dhyai* in 35 forms only in the older parts of the Rigveda. But it is only thematic, which must be a later development, and it is not certain that it is always middle.

The connection with Umbrian-*fi* decides on the original form: it must continue PIE *-dhiōi*. This can only be the dative of a noun in *-dhio-* (which was already obsolete at the end of PIE).

/-ah/

An infinitive in */-ah/* is probable for:

/vrzyah/ 30.5a, from a present stem.

/avah/ 32.14b form */av-, uʔ-/* help, pres. */ava-/*, though the context is hard to understand (there is another */avah/* in 14c, which will be a corruption).

For other forms an infinitive is less probable: */dārayah, fśuyah, savayah, uxśyah/* in 32.1c, 48.5d, 51.9c, 31.7c resp. can be 2 sg. inj. pres.; *azā* in 43.14d is monosyllabic, so it cannot be **/azah/*; probably it is */az/* 'I', 1 sg. pers. pron. */xśayah/* 32.5c may be a nom. sg. m. 'ruler'; *xś(a)yō* 31.20a may be */xśiʔah/*, gen. sg. of */xśiʔ-/* complaint; */vidah/* 51.18b is a them. aor.

It is not certain that this form is identical with Skt. *-as*, which is a (gen.-)ablative formed from root nouns.

/-ai/

/pai/ 44.15b, 16b from */paʔ-/* protect, **pH-ai*. The form could also be considered as a root noun, though then mostly the full grade was generalized.

Other forms are doubtful: */ārai/* (*ārōi*) 50.5a is rather a perfect. */arai/* (**airē*) 28.4a (**māng *airē* for *mān gairē*) is not explained with certainty. *mraoī* will be */mravi/*, pass. aor. */namai/* 46.1a is quite unexplained. */savai/* 43.12e is rather the loc. sg. of *sava-*. *suyē* (*/suʔai/?*) 49.9a is by some taken as an infinitive. */sruyai/* 33.7b is rather from passive */sruya-/* hear. */stai/* is not from **stH-ai* but from *ah-* be (see under */-tai/*).

/-ai/ is identical with Skt. *-e*, in origin the dative ending of root nouns.

/-tai/

/gatai/ 43.1c, 51.10c from *gam-* go.

/mrūtai/ 49.6a from *mruʔ-* speak.

/sastai/ 30.8c, 46.12e from *sanh-* announce.

/stai/ 31.8a, 33.10a etc. from */ah-/* to be.

The forms /itai/ and /pati-(?)rtai/ can better be taken as nouns. /śyavatai/ 29.3b would have the ending after the present stem, so probably does not belong here.

This form may be the dative of a root noun enlarged with -t- in origin. It is not found in Sanskrit.

/-hai, -sai/.

/frādahai/ 44.20e from /frāda-/ increase.

/rāśayahai/ 49x3b, 51.9c causative of /raś-/ injure.

/srāvayahai/ 29.8c causative of /sru-/ hear.

/vaucahai/ 28.11b from the them. aor. /vauca-/ say.

/vainahai/ 32.10a from pres. /vaina-/ see.

/naśai-/ 44.14e from /nas-/ attain. The form may contain the root or the stem of the s-aorist. (Its first a is written long.)

Identical with Skt. -áse, which is used from thematic stems (jīvase, puṣyáse) and with roots (tujáse). There are only two forms with -se (jiṣé, stuṣé).

/-manai/

/xśanmanai/ 29.9a from /xśan-/ listen. Reading and interpretation are uncertain. /-manai/ would agree with Skt. -mane (not with Gr. -menai).

/-vai/

/dāvai/ 28.2b, 44.14d, 51.9b from /da?-/.

/vidvai/ 43.9c, 44.8d from /vid-/ know and/or find.

/-vanai/

/vidvanai/ 31.1b from /vid-/ know.

/rvanai/? from /ar-/. One expects this form to be written *arvanōi/-ē, but we have urvānē.

Identical with Skt. -vane (only dāváne, turváṇe and ?dhúrvaṇe).

Other forms sometimes taken as infinitives

/-ām/ in /ucām/ 48.9c and /vi-da?ām/ 32.6c. These are in fact imperatives of a middle aorist.

/uzūθyai/ 46.5e 'to help'. The form can be the dative of a hysterodynamic noun in -ti-, *-tyai.

/haiθai/ 32.14a from hi- 'bind', can also be the loc. sg. of an a-stem.

/ūθāi/ 46.3d 'to help' has also been interpreted as dative from /ūθa-/ (not connected with av-).

/raiθvan/ 31.7a has been taken as infinitive, but also as a participle (neuter sg.).

/avapastaiš/ 44.4c and /fraʔrtaiš/ 46.4b can as well be taken as nouns.
/uzmahi/ 46.9b has been considered as a locative infinitive of an s-stem.
The form (uzā̆mōhī) is very uncertain.
/varcahi/ 32.14b idem. The form (varəcā.hīcā) is very uncertain.
/apayati/ 32.11b 'by stealing' (apa yam-) is rather a verbal noun.
/apivati/ 44. 18d (from vat- inspire') is rather 1 sg. middle.
/ā vivaršah, cixšnušah, mimagžah/ 45.8a,9a,10a, which clearly mean 'I
shall/will...', are adjectives, not infinitives.
/daiši/ 33.13a is an imperative in -si.

16. Verb forms of uncertain interpretation

byentē 34.8a. From *bhiH- be afraid? If it stands for /bayantai/, the first
half line of a verse of 7-9 syllables would have 8 syllables, which is very
improbable. Athematic *bhiH-antai would give the same problem.
Perhaps *bhHi̯-antai?
daintī 32.15b. Probably from *dH-anti, but meaning and root are
uncertain.
hā̆cā 46.1c. The metre requires three syllables. If it is subjunctive, it was
/hacaʔā/, from the present haca- (which presents active forms in LAv.);
a root aorist would give /hacā/. An ind. pf. /hahaca/ has also been
proposed.
minaš 46.14d. Totally unclear.

17. The verbal system compared with Sanskrit

17.1. Introduction

In the following pages the Gathic verbal system will be compared with
that of the Rigveda. This is important, because Gathic has the same
system as Vedic, whereas in Late Avestan the aorist is moribund, which
affects, of course, the whole system.

Of course our knowledge of Gathic is very limited. Therefore what is
absent from Gathic may be just unknown to us, whereas what is absent
from the Rigveda may be considered to be significant, i.e. not to have
existed in the language.

We compare the verbal system, that is what type of present, what type
of aorist and whether or not there is a perfect. As to the perfect, we have
only a few perfects in Gathic, which may be due to the character of the
texts, Sanskrit mostly has a perfect, which is probably a secondary
development. Therefore, if a perfect is absent from Sanskrit, this is prob-
ably significant.

From each category normally only one form is given, the one that is clearest. Sanskrit reduplicated aorists are not given, as the category as a whole is a Sanskrit innovation. The forms are arranged as follows:

Present	Aorist	Perfect
1, 2 etc. the present classes	R = root aor.	
sk = (PIE) *sk*-pres.	*a* = *a*-aor.	
sa = *sa*-pres.	*s* = *s*-aor.	
aya = *aya-pres*.	*red.* = redupl. aor.	
ya = pres. with *yá*		
va = *va*-pres.		
6*n* = 6 class from *n*-pres.		
6*r* = 6 class from red. pres.		

(Further AV = Atharva Veda, B = Brahmana; M = Middle).

A lemma is introduced by the Avestan root with its meaning and followed by the Sanskrit root with its meaning if there is an etymologically identical root.

+ before the Avestan root means that there is an exactly corresponding root in Sanskrit;

— means that there is no corresponding root in Sanskrit;

(=) behind the roots with their meanings means that all Gathic formations have exact parallels in the Rigveda;

(±) means that there is partial agreement in the formations;

(—) that there is no or very little agreement;

(?) means that comparison is not well possible.

After that follows a short survey of agreement or disagreement between the two languages. There are three indications, for present, aorist and perfect, respectively.

1 etc. = 1st pres. class, as above;

R etc. = root aor., as above;

Gathic categories are given first, the Vedic ones after a colon.

— means that neither of the two languages has forms of that category.

For example   2 : 2,4;   R,s : R;   —

means that:

both languages have a 2nd class present, but that Sanskrit (only) also has a 4th class present;

both have a root aorist, but Gathic (only) also an *s*-aorist;

neither has a perfect.

The denominatives are not included, nor is /*vaina-*/.

17.2. *Results*

We find the following numbers:
159 verbal roots in Gatha-Avestan;

36 roots have no corresponding root in Sanskrit;

7 roots have a doubtful correspondence in Sanskrit;

116 roots remain that have a corresponding form in Sanskrit;

9 of these roots have no present, aorist or perfect (only causative or desiderative forms) or

cannot be used for comparison for other reasons;

107 roots remain that have either a present or an aorist or a perfect and can be compared with Sanskrit;

13 of these roots have no exactly corresponding formation in Sanskrit;

16 roots (of the 107) have an exactly corresponding form in Sanskrit for some of their stems but not for all;

78 roots remain that have an exactly corresponding formation in Sanskrit for all their stems (often only one stem is known in Gathic).

The 36 roots that have no exact counterpart in Sanskrit are:

az draw near	*rah* alienate
ban poison	*rap* support
ciš promise	*raš* damage
ciθ teach/erkennen	*rāθ* cling to
danh know, learn	*riθ* pervade?
dav swear	*sar* unite
daxš reveal	*syazd* retreat
dbanz support	*θvarš* shape
dī see?	*θvi* frighten
dyu/dīv endeavour	*θru* nourish
drang consolidate	*vaf* eulogize
dvar hurry	*van* wish
frād increase	*vap* scatter
hvar eat	²*var* turn
marz destroy	³*var* lock in?
nad abuse	*varz* work
narp wane	*vrāz* be glad
piš see?	*xšnu* satisfy

The 7 roots of which a Sanskrit equivalent is doubtful are:

darz fasten : *dṛh* make firm

hap hold : *sap* serve

ižd implore : *īḍ* praise

mang present with, glorify : *mamh* give, bestow

rup cause pain : *rup* break

sac learn : *śak* be able

sā cut down : *chā* cut off

The 9 roots of which we have no present, aorist or perfect in our texts or which cannot be used for other reasons are:

būš   *ji*

dab   *suc*

had   *vanc*

and:

bī (interpretation of *byentē* uncertain);

dis (Skt. *s*-aorist probably not old: *ádikṣi*);

vraj (are /*vrāxšat*/ and *avrājīt* B old *s*- aorists of a set root?).

The 13 roots of which no formation has an exact correspondence in Sanskrit are:

²*ah*	*mard*	²*rud* hold back
āz	*miθ*	*vižd*
guš	*par* cross	*xrud*
¹*hū* increase	¹*rud* lament	*xsā*
marc		

The 16 roots that have an exactly corresponding formation in Sanskrit for some formations but not for all are:

baj	*spas*	*xrap*
dar	*stā*	*xšā*
garz	*sū*	*yā*
hac	*vat*	*zā*
¹*nas* attain	*vaxš*	
²*nas* disappear	²*vid* find	

The 78 roots that agree in all stems with Sanskrit can be found in the following list (indicated with + and (=)). These systems may be assumed to be of PIE date. They should be completed with data from Late Avestan, though this is dangerous as the material is much younger.

17.3. *List of roots*

The roots are given in phonemic transcription in the order of the Latin alphabet.

PRESENT	AORIST	PERFECT
+*ad* say : *ah* say (=)	- -; - -; pf = pf	
		/*ādar*/
		ā́ha
+*ah* be : *as*- be (=)	2 = 2; - -; pf = pf	
2 /*ahmi, hanti*/		
2 *ásmi, sánti*		/*āhar*/
		ā́sa
+²*ah* throw : *as* throw (-)	- : 4; R : -; -: pf	
R /*as*/		

4 *ásyati* *ā́sa*

+**ar** rise : *īr, r̥* set in motion (=)   3,6r = 3,6r;   R = R,*a*;   pf = pf

3 /*uz-ʔiʔr-dyāi*/ inf   R /*aʔaram, arantai*/ sub. /*ārai*/

6r /*īra-tu*/

3 *íyarti, írte*   R *ā́rta,* opt. *arīta* *ā́ra*

6r *aírat*   *a ā́rat, áranta*

+**ard** flourish : *r̥dh* thrive (=)   -: 4,5,7;   R = R;   -:pf

R /*ardat*/ sub

4 *ŕ̥dhyati*   R*r̥dhyā́m* opt. *ānr̥dhe*

5 *r̥dhnóti*

7 *r̥nádhat* sub

+**arj** be worth : *arh* deserve (=)   1 = 1;   - -;   - -

1 /*arjati*/

1 *árha-ti*

+**aug** say : *ūh* consider (=)   2M = 2M;   -:*iṣ*;   -:pf

2 /*auj-ai, aug-madai-*/

2 *óhate*   *iṣ áuhiṣṭa* *ūhé*

+**av** comfort : *av* favour (=)   1 = 1;   -: R, *iṣ*;   -:pf

1 /*avā-mi*/

1 *áva-ti*   R *avyā́s* *ā́va*

iṣ ā́vīt

—**az?** draw near:

1? /*azāθa*/ ind? (see *zā*)

+**āp** obtain : *āp* obtain (=)   - : 5;   *a = a*; pf = pf

a /*āpaima*/ /*āpāna-*/

5 *āpnóti*   *a ā́pat* *ā́pa*

+**āz** be eager : *ˣāh* desire (-)   4 : 6r;   - -;   - -

4 /*īzyā*/ ind.

6r (*ī́hate* B)

+**baj** distribute : *bhaj* divide (±)   1*sa* : 1,2;   *s = s*;   -:pf

1sa /*baxša-hva*/ imp.   *s* /*baxšta*/

1 *bhájati*   *s ábhāk, ábhakṣi* *babhā́ja*

2 *bhákṣi*

—**ban** poison:

CS /*bānayan*/

+**bar** bring : *bhr̥* bring (=)   1,(2?) = 1(2,3);   - : *s*; - : pf

1 /*bara-ti*/

2 /*bar-tu*/?

1 *bhára-ti*   *s ábhārṣam* *jabhā́ra*

2 *bharti*

3 *bíbhar-ti*

+**bī?** be afraid : *bhī* fear (?)

byente = ?

3 *bibhéti*	R *bhema*	*bibhā́ya*
1 *bháya-te*	(s *ábhaiṣma*)	

+ **bū** be : *bhū* be (=)   1 = 1;   R = R;   - : pf

1 */bavantīš/* ptc.	R */buvat(i)/* sub	
1 *bhávati*	R *ábhūt*	*babhū́va*

+ **bud** be aware : *budh* is awake (=)   1 = 1,4; - : *R, a, s;*   - : pf

1 */bauda-nt-/*

1 *bódha-ti*	R *ábudhran*	*bubudhé*
4 *búdhyate*	*a budhánta*	
	s ábhutsi	

+ **būš** bring about : *bhūṣ* is busy, cares (?)
No finite forms. */bŭždyai/* inf
(6) *bhū́ṣati*

+ **ci** distinguish : *ci* gather (=)   5 = 5;   R = R   - :-pf

5 */cinaut/*	R */šyata/* 3p	
5 *cinóti*	R *acet*	*cikā́ya*

—**ciš** promise:

7 */cinas/*	R */caišam, caišta/*

+ **cit** think : *cit* perceive (=)   - : 1,2;   - : *R, s;*   pf = pf

		/cikaitrš/
1 *céta-ti*	R *cítāna-*	*cikéta*
2 *cité* 3s	*s ácait*	

—**ciθ** teach/erkennen :

	R */(a)cista/*, */caiθat/* sub

+ **dab** deceive : *dabh* deceive, harm (?)   cs = cs, 1;   - : R;   - : pf
CS */dābayati/*

1 *dábha-ti*	R *dabhúr*	*dadā́bha*
CS *dambháyati*		

—**danh** know, learn :
3 */didahai/* 1s

+ **dar** hold : *dhṛ* hold (±)   cs = cs;   R, s = R;   pf = pf
CS */dārayat/*

	R */dṛta/*	*/dadrai/*
	s */dāršt/*?	
CS *dhāráyati*	(R *dhṛ-thās* AV)	*dādhā́ra, dadhré*

+ **dars** see : *dṛś* see (=)   - -;   R = R (a, s)   - : pf

	R */(a)darsam/*	
	R *ádṛśran*	*dadárśa*
	(a *dṛśan*)	
	s *ádṛkṣata*	

? **darz** fasten : ? *dṛh* make firm (?)
DES */didržah/*

Comparison impossible

— *dav* swear:

1 /*dava-nt-*/

—*daxš* please, teach, reveal :

1 /*daxšat*/

CS /*daxšaya*/ imp

+ *dā* give, put : *dā* give, *dhā* put (=)   3 = 3; R = R(*a*); - : pf

3 /*dadāti*/	R /*dāt*/	
3 *dádāti*	R *ádāt*	*dadau*
3 *dádhāmi*	R *ádhāt*	*dadháu*
	a dhat	

+ *dā²* distribute : *dā* divide (=)   *ya = ya, aya,* 2;   - : *s*;   - -

ya /*dyaʔāi*/ sub

2 *dấti*	*s diṣīyá* opt.

ya dyáti

aya dáyate

+ *dā³* bind : *dā* bind (=)   *ya = ya*;   - -;   - -

ya /*dyatām*/ imp.

ya dyáti

— *dbanz* support :

1 /*dbanzati*/

+ *dbu* befool : *dbhu* harm (=)   5 = 5;   - -;   - -

5 /*dbnauta*/

CS /*dbāvayat*/

5 *dabhnuvanti*

+ *dbiš* be at enmity with : *dviṣ* hate (=)   2,4 : 2;   - -;   - -

2 /*dbišanti*/

4 /*dbišyant-*/

2 *dvéṣṭi*

— *dĭ* see? :

3 /*dadyat*/

  /*dă̆yatai*/?

+ *dis* show : *diś* show (?)   - : 4; *s = s(R)*;   - : (pf)

	s /*dāiš*/	
4 *diśấmi*	*s ádikṣi*	(*dideśa* AV)
	R *ádiṣṭa*	

Ved. *dikṣ-* does not have the old ablaut. Nart. 140f.

— *dĭv* endeavour; or *dyu*?

4 /*dīvyanti*/? /*dyuyanti*/?

— *drang* consolidate :

DES /*didragžadvai*/

+ *druj* deceive : *druh* be hostile (=)   4 = 4;   - : *a*;   - : pf

4 /drujyant-/

4. drúhyati B   a druhás   dudróha

— dvar hurry :

1 /dvaranta/

+ fras ask : praś ask (=)   sk = sk;   s = s;   - -
sk /prsā/   s /fraši/
sk pṛccháti·   s aprāksam

— frād increase :

1 /frādantai/

+ frī please : prī please (=)   9,6n = 9;   - : s   - : pf
9 /frīnāi/ sub
6n /frīnamna-/
9 priṇā́ti   s preṣat sub   pipriyé

+ gam go : gam go (=)   sk = sk;   R = R (a, s);   -: pf
sk /jasat/   R /jan, gman/
sk gácchati   R ágan   jagáma
                                   (a ágamat)
                                   (s agasmahi)

+ garz complain : gṛh complain (±)   2M,3 = 2M;   - -;   - -
2 /grzai/, /gržda/
3 /jigrzat/ 3pl
2 gṛhe (Hoffmann Aufs. 439)

+ gā go : gā go (=)   - : 3;   R = R   - : pf
                             R /gaʔat/
3 jígāti   R ágāt   jagāyāt opt

+ grab grasp : grabh seize (=)   - : 9   R = R   - : pf
                             R /graham/
9 gṛbhnā́ti   R ágṛbhran   jagrábha

+ guš hear : ghuṣ (-)   - : 1;   R,a : -;   - -
                          R /gušta/
                          a /gušata/ M
1 ghóṣati

+ hac follow : sac follow (±)   1,6r : 1;   R,s : s;   - : pf
1 /hacatai/   R /hacā, scantu/
6r /hiscāmadai/ YH   s /haxšāi/
1 sácate   s (a)sakṣata 3p   saścúr

+ had sit : sad sit(?)
DES /hišsat/
Comparison impossible

+ hah sleep? : sas sleep (=)   2 = 2;   - -;   - -
2 /hahmi/

2 *sásti*

+ **han** earn : *san*[i] win, gain (=)   - : 8;   *a* = *a*;   - : pf

              a /hanaɔāni/ sub

8 *sanóti*   *a ásanat*   *sasána*

? **hap** hold : *sap* serve (—)   2 : 1;   - -;   - : pf

2 /hapti/

1 *sápati*   *sepúr*

+ **hi** bind : *si* bind (=)   - : 9;   - : R;   pf = pf

                                     /hišāya/

9 *sináti*   R *sitám* imp.   *sišáya*

+ **hū** increase : *sū* impel (—)   9 : 6,2;   - : *iṣ*;   - : pf

9 /hunāti/

2 *sū́te*

6 *suváti*   *iṣ ásāvīt*   *sasū́va*

— **hvar** eat :

1 /hvaramna-/

+ **i** go : *i* go (=)   2 = 2;   - -;   - : pf

2 /aiti/

2 *éti*   *iyā́ya*

+ **īs** be able : *īś* be master (=)   2 = 2(1);   - -;   - : pf

2 /īsai/ 3s

2 *ī́ṣṭe*   *ī́śire*

1 *ī́śate* 3s

+ [1]*iš* desire : *iṣ* desire (=)   *sk* : *sk*;   - -;   - -

sk /isaya/ opt. M

sk icchʹáti

+ [2]*iš* urge, impel : *iṣ* send (=)   4,6 : 4,6,9;   - -;   - : pf

4 /išya/

6 /išaɔat/

4 *íṣyati*   *īṣúr*

9 *iṣṇáti*

6 *iṣánta*

? **ižd** implore : *īd*? praise   *sk* : 2;   - -;   - : pf

sk /išsaɔā/

2 *ī́ṭṭe*   *īḍé*

+ **jan** slay : *han* slay (=)   2 : 2;   - : -;   - : pf

2 /jan/

2 *hánti*   *jaghána*

+ **ji** win : *ji* win, conquer (?)

DES /jijīšanti/ 39.1

DES *jígīṣati*

+ **jī** live : *jī* live (=)   *va* : *va*;   - -;   - -

va /jīvāmahi/
va jǐvati

+ **kan** enjoy, desire : *kan*[i] enjoy (=)   4 : 4;   - : *s*;   pf = pf
4 /kāyā/ ind.   /cāxnar/
4 kā́yamana-   *s* ákāniṣam   cā́kanat, caké

+ **kar** make : *kṛ* make (=)   5 : 5(8,2);   R : R;   - : pf
5 /kṛnavan/ sub.   R /cart/
5 kṛṇóti   R ákar   cakā́ra
8 karóti
(2 karṣi AV)

+ **man** think : *man* think (=)   4 : 4(8);   R,s : R,s;   - : pf
4 /manyatai/   R /manta/
                            s /manhi/
4 mā́nyate   R -amata   mamnā́te 3d
8 manuté   s ámaṁsta

? **mang** present with, glorify : ? *maṁh* give, bestow (?)
DES /mimagžah/

+ **mar** recite, have in mind : *smṛ* remember (=)   1 : 1;   - -;   - -
1 /maranti/
1 smárati

+ **marc** destroy : *mṛc* injure (—)   7 : -;   *s* : prec;   - -
7 /mrncatai/ 3p ind   s /marxšati/ sub
CS marcáyati   s mṛkṣīṣṭá prec.

+ [1]**mard** destroy : *mr(a)d* crush (—)   6n : 1(9);   - -;   - -
6n /mrndat/ inj.
1 mrada
(9 mṛdnā́ti S)

+ [2]**mard** neglect : *mṛdh* neglect (=)   - : 1,6;   R : R(iṣ);   - -
                            R /mardati/ sub
1 mardhati   R mṛdhyā́s opt.
6 mṛdhā́ti sub   iṣ mardhiṣat sub

— **marz** destroy:
7 /mrnždyāi/ inf.

+ **maržd** be merciful : *mṛd* be gracious (=)   6 : 6;   - -;   - -
6 /mrždata/ imp
6 mṛdáti

+ **mā** order : *mā* measure (=)   3 : 3;   - : R,s;   - : pf
3 /mimāθa/
3 mímīte, mímāti   R mā́hí imp.   mamátur
                            s ámāsi
+ **miθ** rob : *mith* alternate (—)   - : 1,2;   R : -;   - : pf
                            R /maist/

1 *méthāmasi, methete*   *mimétha*
2 *mithatī* f. du.
+ **mrū** speak : *brū* speak (=)   2 : 2;   - -;   - -
2 /*mraumi*/
2 *brávīti*
+ **mruc** dive : *mruc* set (=)   1 : 1;   - -;   - -
1 /*mraucans*/ ptc
1 *mrócati* AV
— **nad** abuse :
1 /*nadant-*/ ptc
— **narp** wane :
6sa /*nrfsati*/
+ ¹**nas/ans** attain : *naś* /*aṁś/aś/nakṣ* attain (±)   4 : 1,5sa;   R,s:R;   -:pf
4 /*ansya*/ imp   R /*asyāt*/ opt
                             s /*našāma*/ sub
1 *náśati*   R *ánaṭ* (*aśyāt ā́ṣṭa* M)   *ānáṁśa*
5 *aśnóti*
sa *nákṣati*
Ved. *nakṣati* from an *s*-enlargement of the root. Perhaps the starting point
was a *sa*-subjunctive, which was probably already PII because of
/*našāma*/.
+ ²**nas** disappear : *naś* disappear (±)   4 : 4,1;   a(r) : r;   pf : pf
4 /*nasyant-*/   *a* (red) /*anansat*/   /*nanāsa*/
4 *násyati*   (red. *ánīnaśat*)   *nanā́śa*
1 *náśati*
+ **nī** lead : *nī* lead (=)   - : 1;   s : s;   - : pf
                           s /*naiśat*/ sub
1 *náyati*   s *naiṣṭa* 2p, *neṣat*   *nináya*
+ **par** fill : *pṝ/prā* fill (=)   6n : 6n,9,3;   - : R;   - : pf
6n /*prna*/
9 *pṛṇā́ti*   R *pūrdhí*   *papráu*
6n *pṛṇáti*
3 *píparti*
On the *s*-aor. see Narten 173.
+ **par** cross : *pṛ* pass (—)   - : 3;   a : s;   - -
                           a /*fraꝻā*/
3 *píparti*   (*s parṣati* sub)
+ **pā** protect : *pā* protect (=)   2 : 2;   - -;   - -
2 /*pāt*/
2 *pā́ti*
— **piš** see? :
4 /*piśyanti*/

— **rah** alienate :
INT /raʔršyanti/
CS /rāhayan/

— **rap** support :
1 /rapá/ imp

— **raš** damage :
CS inf /rāšayahai/

+ **rā** grant : *rā* give (=)   - : 3;   s : s;   - : pf
                                      s /rāhahai/ sub

3 *rirīhi* imp   s *árāsata, rāsat*   *rarimá*

+ **rād** accomplish : *rādh* succeed (=)   - -;   R : R;   - : pf
                        R /rādat/ sub
                        R *rādhat* sub   *rarádha*

— **rāθ** cling to :
2 /rāsti/

— **riθ** pervade?
va /raiθvan/ ptc.

+ **rud** lament : *rud* weep (—)   (cs) : 2;   s : a;   - -
CS /rudayata/   s /rausta/
2 *róditi*   a *árudat* (once) AV

+ **rud** hold back : *rudh* obstruct (—)   3 : 7;   - : R,a;   — : pf
3 /ruraust/
7 *runádhmi*   R *arodham*   *ruródhita*
                       a *arudhat*

? **rup** cause pain : *rup* break (?)   (cs) : 4   - : red;   - -
CS /rupayanti/
4 *rúpyati* (B.)   red *árūrupat* AV

? **sac** learn :? *šak* be able (—)   4 : 5   - : R   - : pf
4 /sašyaθa/
5 *šaknóti*   R *šákat* sub   *šašáka*
The lack of agreement might indicate that the roots are not cognate.

+ **sand** seem, please : *chand* seem (=)   - : 2; s : s   - : pf
                          s /sāns/
2 *chántsi*   s *áchān*   cachánda

+ **sanh** announce : *šaṁs* praise (=)   1 : 1;   R : R;   - -
1 /sanhati/   R /sahyát/ opt
1 *šáṁsati*   R *šastá* 2 pl

— **sar** unite :
1 /sarantai/   s /sāršta/

? **sā** cut down :? *chā* cut off (±)   4 : 4;   s : -;   - -
4 /syadvam/   s /sāzdvam/ imp
4 *chyáti* AV

+ **sāh** teach : *śās* order (=)   2 : 2; *a* : *a*(R); - : pf

2 /sāsti/   *a* /siṣait/ opt

2 *śā́smi*   ? R *śā́sas* sub   *śaśāsa*

                               a *śíṣat*

sižd see *syazd*

+ **spas** perceive : *paś, spaś* see (±)   4,5 : 4; - : R; - : pf

4 /spasyā/ ind

5 /spašnuθa/

4 *páśyati*   R *áspaṣṭa*   *paspaśé*

+ **sru** hear : *śru* hear (=)   5 : (5); R,*s* : R; - : pf

5 /srnvant-/   R /asru(ž)dvam/

                            s /srauśānai/

5 *śṛṇóti*   R *áśrot*   *śuśrā́va*

+ **stā** stand : *sthā* stand (±)   1r : 1r; *s* : R,*a*; - : pf

1r /xštat/   *s* /stāhat/

1r *tíṣṭhati*   R *ásthāt*   *tastháu*

                            a *ā́sthat* AV

+ **stu** praise : *stu* praise (=)   2 : 2; - : *s*; - : pf

2 /stāumi/

2 *stáuti*   *s* *ástoṣṭa*   *tuṣṭā́va*

+ **sū** strengthen : *śū* swell (±)   *aya* : *aya*; - -; - : pf

aya /suvayah/? inf

aya *śváyant-*   *śuśuvúr*

+ **suc** flame : *śuc* gleam (?)   cs : cs; - -; - : pf

CS /saucayat/

CS *śocáyati*   *śuśóca*

— **syazd** retreat :

4 /sižd yamna-/   R /syazdat/ sub

+ **ši** dwell : *kṣi* dwell (=)   2 : 2,1; - : *s*; - -

2 /šaiti/

2 *kṣéti*   *s* *kṣéṣat* sub

1 *kṣáyati*

+ **šyu** activate : *cyu* move,stir (=)   1 : 1; - : *s*; - : pf

1 /šyavatai/

1 *cyávate*   *s* *acyoṣṭa*   *cucyuvé*

+ **tar** overcome : *tṝ, tūrva-* overpower (=)   *va(ya)* : *va*; - -; - -

va(ya) /tarv(ay)āma/?

tū́rvati

If the emendation to /tarvāma/ is correct, the stem agrees with Skt. In any case /tarvayāma/ presupposes a stem **tarva-*.

+ **taš** shape : *takṣ* fashion (=)   2 : 2(static); *a* : *a*; pf : pf

2 /tāšt/   *a* /tašat/   /tatāša/

2 *tā́ṣṭi*   *a* *tákṣati*   *tatákṣa*

+ *tū* be able : *tū* be strong (=)   2 : 2;   - -;   - : pf

2 /*tavā*/ sub

2 *táviti*   *tūtáva*

+ *θrā* protect : *trā* rescue (=)   4 : 4,2;   *s* : *s*   - : pf

4 /*θrāyadyāi*/ inf   *s* /*θrāzdvam*/

4 *tráyase*   *s* *trásate* sub   *tatré*

2 *trásva* imp   •

— *θru* nourish :

                                        s /*θraušta*/

— *θvars* shape :

                                        s /*θvaržduam*/

— *θvi* frighten :

1 /*θvayahi*/

+ **vac** say : *vac* say (=)   - : 3;   *a* : *a*;   pf : pf

                                        a /*vaucat*/   /*vauxma*/

3 *vívakti*   *a* *ávocat*   *uváca, vaváca*

— **vaf** eulogize :

4 /*ufyā*/

+ **vaina-** observe : *vena-* observe (=)   1 : 1;   - -;   - -

1 /*vainahi*/

1 *vénati*

+ **vah** be dressed : *vas* wear (=)   2 : 2;   - : *iṣ*;   - : pf

2 /*vastai*/

váste   (*iṣ ávasiṣṭa*)   *vāvasé*

+ **van** overcome : *vani* win (=)   1 : 1,6,8;   *s* : R,*s*; pf : pf

1 /*vananti*/   *s* /*vāns*/   /*vaunar*/

1 *vánati*   R *vámsva* imp   *vāvána*

8 *vanóti*   *s* *vaṁsat*

6 *vanáti*

— **van**? wish :

Or adj. /*vanu-*/   /*vaunuš*/ ptc?

+ **vanc** jump : *vañc* move crookedly (?)

Only pass. pres. /*vašyatai*/.

— **vap** scatter; snatch away; cut down

1 /*vapat*/

+ **var** choose : *vṛ* choose (=)   9 : 9;   R : R;   - : pf

9 /*vrnai*/   R /*varta*/

9 *vṛṇīté*   R *ávri, ávrta*   *vavṛmáhe*

— **var** turn :

5 /*vrnavatai*/ sub   *a* /*vaura?atai*/ sub ?

— **var** lock in? join, couple? :

                                        R /*varāni*/ sub

+ **vard** grow : *vṛdh* grow (=)   1 : 1;   - : a;   - : pf

1 /*vardati*/

1 *várdhati*   a *ávṛdhat*   *vavárdha*

— **varz** work

4 /*vṛzyat*/   R /*varzīma*/   /*vārvṛzai*/

                               s /*varšati*/

+ **vas** wish : *vaś* desire (=)   2 :2,1,3;   - -;   - : pf

2 /*vasmi*/

2 *vaṣṭi*   *vāvaśúr*

1 *váśanti*

3 *vivaṣṭi*

+ **vat** understand : *vat* apprehend (±)   (cs) : 1(cs);   R? : -;   - -

CS /*vātayāmahi*/   R? /(*api*)*vati*/ inj. M.

1 *vátema*

CS *vātáyati*

+ **vaxš** grow : *ukṣ*, *vakṣ* grow (±)   4(cs) : 1,6(cs);   R : *iṣ*;   - : pf

4 /*uxšyati*/   R /*vaxšt*/

CS /-*uxšayant*-/   :

1 *úkṣant*-   .   (*iṣ áukṣīs*)   *vavakṣa*

6 *ukṣámāna*-

CS *ukṣáya*-

+ **vid** know : *vid* know (=)   - : 2?;   - -;   pf : pf

                                                       /*vaida*/

2? *vidmás*?   *véda*

+ **vid** find : *vid* find (±)   1,7 : 6n,2;   a,s : a,(s);   - : pf

7 /*vinasti*/   s /*vaizdvam*/

1 /*vaidadvam*/   a /*vidat*/

6n *vindáti*   a *ávidat*   *vivéda*

2 *vidé*   (s *avitsi*)

The Sanskrit *s*-aor. is an independent innovation.

+ **vid** distribute, serve : *vidh* satisfy (=)   - -;   a : a;   - -

                               a /*vidaʔat*/ sub

                               a *vidhát*

+ **vis** sich bereitstellen : *viś* enter (=) .   6 : 6;   - : R,s;   - : pf

6 /*visantai*/

6 *viśáti*   R *áviśran*   *vivéśa*

                               s *ávikṣmahi*

+ **vižd** raise (a weapon) : *vīḍ* make firm (—)   1 : aya;   - -;   - -

1 /*vaiždat*/

aya *vīḍáyati* (Mayrh. s.v. *vīḍúh*)

+ **vraj** walk : *vraj* proceed (?)   - : 1;   s : (*i*)*s*;   - : pf

                               s /*vrāxšat*/ 3 pl

1 *vrájata* imp   (*i*)*s avrājīt* (B)   *vavrā́ja*

Narten 251 considers *avrājīt* as an old *s*-aorist of a seṭ root.

— **vrāz** be glad:

/*vavrāzaθa*/ sub

+ **xrap** angemessen sein : *klp̥* be adapted (±)   1 : 1;   - -;   - : pf
1 /*xrapati*/

1 *kálpate*   *cāklp̥úr*

+ **xrud** make/become afraid : *krudh* be angry (—)   - : 4;   R : a; - -

R /*xraudat*/ sub

4 *krúdhyati*   *a krudhas*

+ **xrus** scream : *kruś* cry out (=)   1 :1;   - : *sa*;   - -
1 /*xrausantām*/

1 *króśati*   *sa akrukṣat*

+ **xsā** observe : *kśā* reports (—)   - : 2;   *a* : -;   - : pf

a /*xsaʔāi*/

2 *kśā́ti*   *cakśé*

+ **xšā** rule : *kṣā* rule, possess (±)   *aya* : *aya*;   *a* : -;   - -
aya /*xšayahi*/   *a* /*xšaita*/ opt

aya kṣáyati

+ **xšnā** get to know : *jñā* know (=)   9 : 9;   - : R,*s*;   - : pf
9 /*zānta*/ imp

9 *jānā́ti*   R *jñeyás*   *jajñáu*

s *ájñāsthās* AV

— **xšnu** satisfy :

2 /*xšnaviša*/ opt   s /*xšnāuš*/

sa /*xšnaušamna-*/ ptc

+ **yam** hold : *yam* hold (=)   *sk* : *sk*;   R : R,*s*;   - : pf
sk /*yasai*/   R /*yanta*/ inj M

sk yácchati   R *áyamur*   *yayā́ma*

s *áyāṃsam*

+ **yat** line up : *yat* place (in the right position) (=)   -:1;   -:R;   pf:pf

/*yaiθma*/

1 *yátati*   R *yátāná-*   *yetiré*

+ **yaz** adore : *yaj* sacrifice (=)   1 : 1;   - : *s*;   - : pf
1 /*yazatai*/

1 *yájati*   s *ayaṣṭa* M   *ījé*, (*yejé* AV)

+ **yā** long for : *yā* request, implore (±)   3,*sk* : 3,2;   - : *siṣ*;   - -
3 /*iʔai*/

sk /*yāsā*/

3 *iye*

2 *yā́ti*   *siṣ ayāsiṣam*

+ **yuj** yoke : *yuj* join (=)   - : 7;   R : R;   - : pf

R /yaugt/

7 *yunákti*   R *áyuji*   *yuyója*

+ **zar** be angry : *hī̄* be angry (=)   6n : 9;   - -;   - -

6n /zarnaima/

9 *hṛnīté*

+ **zā** win : *hā* leave (±)   3 : 3;   R : s;   - : pf

3 /zazat/ 3pl.   R /zaima/ opt

3 *jáhāti*   s *ahás* 3 sg   *jahá̄*

+ **zi** abandon : *hi* impel (=)   - : 5;   R : R;   - : (pf)

R /zayaθa/ sub

5 *hinóti*   R *ahéma*   (*jighá̄ya* B)

Uncertain. Also taken as pres. of *zā-*.

+ **zū** call : *hū, hvā* call (=)   aya : aya, 3;   - : R,a,s;   - : pf

aya /zuʔayā/

aya *hváyati*   R *áhūmahi*   *juvhé*

3 *juhūmás*   a *áhvat*

s *ahū́ṣata*

18. Reverse index of verbal roots

18.1. Reverse index of Gathic verbal roots

[1]*dā* give, put	*hac*	[1]*mard* destroy	[1]*ah* be
[2]*dā* distribute	*sac*	[2]*mard* neglect	[2]*ah* throw
[3]*dā* bind	*vac*	*vard*	*hah*
gā	*vanc*	*bud*	*rah*
mā	*marc*	[1]*rud*	*vah*
xšnā	*mruc*	[2]*rud*	*sāh*
pā	*suc*	*xrud*	*danh*
rā		*ižd*	*sanh*
θrā	*ad*	*sižd, syazd*	
sā .	*had*	*vižd*	
xsā	*nad*	*maržd*	*i*
xšā	*rād*		*ci*
stā	*frād*	*vaf*	*di*
yā	[1]*vid* know		*hi*
zā	[2]*vid* find	*g* cf. *j*	*ji*
	[3]*vid* distribute	*mang*	*ši*
dab	*sand*	*drang*	*θvi*
grab	*ard*	*aug*	*zi*

bī	*xrap*	*īs*	*dbu*
jī	*vap*	*dis*	*dyu, dīv*
nī	*āp*	*vis*	*xšnu*
frī	*narp*	*dars*	*sru*
	rup	*θvars*	*θru*
		xrus	*stu*
j cf. *g*			*šyu*
baj	*ar*		*av, ū*
vraj	*bar*	*raš*	*dav, dū*
arj	*dar*	*taš*	
druj	*kar*	¹*iš* desire	
yuj	*mar*	²*iš* urge	*bū*
	¹*par* fill	*dbiš*	*hū*
k see *c*	²*par* cross	*ciš*	*mrū*
	sar	*piš*	*sū*
gam	*tar*	*guš*	*tū*
yam	¹*var* choose	*būš*	*zū*
	²*var* turn	*daxš*	
ban	³*var* lock in	*vaxš, uxš*	*yaz*
han	*dvar*		*āz*
jan	*hvar*	*vat?*	*vrāz*
kan	*zar*	*yat*	*dbanz*
man		*cit*	*darz*
¹*van* overcome	¹*nas* attain		*garz*
²*van?* wish	²*nas* disappear	*rāθ*	*marz*
	spas	*ciθ*	*varz*
hap	*fras*	*miθ*	
rap	*vas*	*riθ*	

18.2 Total number of roots in:

k,c 7	*g,j* 3,5		
t 3	*d* 21	*θ* 4	
p 7	*b* 2	*f* 1	
s 11	*z* 8	*š* 11	*h* 8
r 15	*m* 2	*n* 7	
i 8	*u,v* 9		
ī 4	*ū* 6		
ā 15			

Roots that ended in a laryngeal are:
those in -*ā*, -*ī*, -*ū*;
those in -*θ*;
[1]*par*, [1]*var* choose, *zar*;
han, kan, [1]*van* win;
av/ū, dav/dū.

CORRECTIONS TO THE INDEX GIVEN BY MONNA

Some minor misprints are not noted, especially the omission of diacritics which can be seen in related forms given.

aešasa- and *aeša-*: invert

ah- /*āhva*/ 1 du. imf.

Add: ²*ah-* throw; root aor. *ah-*

        as /*as*/ 2 sg. inj. 34.8a, c

        aŋhat /*ahat*/ 3 sg. sub. 44.19d,e

anhayā: *aŋhayā*; s.v. *hāly*)-: s.v. *hā(y)*-.

aŋhu- /*ahuvāh*/

apəma- after *a.* add: *apivaiti* see *vat-*

ar- pres. *ərə-*, *ĭra-*: delete *ərə-*, read *īr-*, *īra-*

    paitī.ərətē inf. or noun

    /*uz i:ŗdyāi*/

add: *urvānē* /*rvanai*/? inf.?

aša- read *arta-* everywhere, also in the following words

ašavan- ašaonō: *ašāunō*

        ašāunō: *ašaonō*

aši- ašiš

avā to, towards: down, off

azəm azē: *azə̄*

azi-: *azī-*

ā 43.3d delete (2 ×); reconstructed in other forms (*avaēnatā*, forms of *i-*)

ā.hōiθōi see *hā-*: see *ā.hōiθa-* and *hi-* (invert with *ā.hōiθa-*)

aiθi- aiθīšcit

ā.manaŋhā-: *ā.manaŋha-*

ārəzva- /*ārzava*/

ārmaiti- ārmatōiš

ā.sənda-: *ā.sə̄nda-*

āz- /*īzya-*/

būri-: *būiri-* (to be placed before *būj-*); gen. sg. n.

ciš- cinas delete 32.5c

    cəvīšī 3 sg. pass. aor.

    cəvištā 2 pl. inj. aor.

ciθ- add: *cinas* 32.5c

dab- /*dbnauta*/?

    dābayeiti 3 sg. ind.

daēnā- /*dayanā-*/

daršti- /dr̥štaiš/

dā- Aor. imp. *dǎ(s-)*: Aor. inj.·

    Pres. ptc.: Aor. ptc.

daṃi- *daṃīm*

dəbaz- pres. *dəbaza-*; 3 sg. ind. pres.

dājīt̤.arəta- /djitarta-/

dis- *dōišā* 1 sg. subj.

    dōišī 2 sg. imp.

dušərəθri- acc. pl. m.

duždaēna- put before *duždāh-*

əəāvā read: adv. down

ərəθwa- *ərəθwō*

əvisti-

fra delete *frā, fərā*: delete 30.5c, 49.8d

fraxšnin- m.: or n.

frāxšnəna- adj.: acc. sg. n.

frī-

fsərətū- /fsratuam/

gam- *jānghaticā*

gərəz- *jīgərəz-* (twice)

grəham- Ins. *grəhmah-* n. wealth, adj. rich (*grəhmǎ for *grəhmā)

hac- *scantu* imp. root aor.¯

    haxšāi s-aor.

haurv(at)āt- *haurvåscā*

hāra- before *h.* insert: *hāma-* see *hama-*

i- *āyōi* see *yā-*

   idūm see *yā-*

   /ā yantam/

   add: see *iša-*

is- delete *isōyā, isəmnō*

¹*iš-*, ²*iš-*, ³*iš-* read as follows:

¹*iš-* desire: pres. *isa-* (Skt. *icchåti*)

    isōyā /isaya/ 1 sg. opt. med. 43.8b

    isəmnō /isamnah/ ptc. 46.6a

²*iš-* set in motion;

    pres. *iša-* (Skt. *iṣe*)

      išəntī /išanti/ 3 pl. ind. 46.9e

      išāt̤ /išaʔat/ 3 sg. sub. 44.2c

      išånti /išaʔanti/ 3 pl. sub. 45.7a

    pres. *išya-* (Skt. *iṣyati*)

     fraēšyā /fra išyā/ 1 sg. ind. 49.6a

iša- desid. of *i-* go (Skt. *íṣati*); *Hi-Hi-sa-*.

išaθā /īšaθa/ 2 pl. ind. 45.1b

išəntō /īšantah/ ptc. 30.1a, 47.6d

išya- išyąm 51.7b: 17b

jōya-

ka- kā 29.1d: 1a; 44.5b/d: 5bcd; 46.14a/b: 14b; 49.5c: delete 5c

    kaṯ delete 28.5a, 48.2c, 50.1a (see s.v. kaṯ)

katāra- before k. add: kaṯ interrog. particle 28.5a, 48.2c, 50.1a

ma- mah'yå /mahyāh/

manah- manahicā

marəka-

marəxtar-

maša- replace: mašā 29.11a, read *mām *ašā Ins.

mazdā- mazdåscā nom. pl.: sg.

              ,,   voc. pl.: sg.

māh- /maah/

mąθrān-

marəc- marəngəduyē /mrṇgdvai/ delete (subj.)

miθ- mōisṯ: mōisṯ

mošū /mašū ca/

¹nas- delete: red-aor. nąsa-

    nąsaṯ /nasat/ 3 sg. sub. root aor.

paouruya- paouruyē 44.11a: 11d

paru- delete; add after par-: parao- see pouru-

pərətu- pərətā /pṛtāu/

ptar- fədrōi /fθrai/

rah- /ra:ṛšyanti/, /ra:ṛšyaan/

rārəša- /ra:ṛšah/

sənghu-

spitama- /spitamāhah/

sru- səraošānē pres.: aor.

    sruyē delete: (or...med)

syazd- /siždyamnā/

šyaoθana- /šyauθna-/ everywhere

θru- θraoštā 2 pl: 3 sg. med.

urvan- urvānē add: Hu. inf. of ar-

urvāz- med.: act.

urvāzā /vrãzā/

ušti- /uštịš/

var- /varta/ twice, /varmadi/

vasah- after v. add: vasə̄, -ō adv. at will

             vasā /vasah/ 43.1b, 50.9c

             vasō   ,,   31.19b, 32.15b

važdra-

vərəzə̄na- *vərəzə̄nah'yā* delete 46.1c and add 46.1c to *vərəzə̄nā*

²*vid-* read: pres. *vinad-*, *vaēda-*, intens. *vōivīd-*, a-aor. *vīda-*, s-aor. *vōis-*
    add: *vōizdyāi* inf. s-aor. 43.13c

vīs- read: pres. *vīsa-*
    subj.: ind. pres. (twice)

xsā- *āxsō* med.: act.

xšā- *xšayəhī*: *-ehī*
    xšə̄ntā subj. pres.: inj. aor.
    xšəntąm pres.: aor.

xšnā- pres. *zān-*: *zānā-/zān-*

xᵛaēta- /hva:itah/

xᵛāpaiθya- /hvapaθyāt/

xᵛīti- *xᵛīticā*

yam- *hə̄m.yāsaitē* /ham yasatai/

yā- add: red. pres. /iʔ-/
    āyōi /ā iʔai/ 1 sg. ind. 31.2b
    idūm /īdvam/ 2 pl. imp. 33.7a

yauždāh- read: *yaoždā-*

yuj- read (only): aor. *yaog/j-*, *yug/j-*

zar- /zarnaima/

zava- n.: m.

zū- *zbayā* subj.: ind.

INDEXES

So as to facilitate the use of the indexes two 'keys' are given here, one from the forms of the manuscript to the phonemic notation, and one *vice versa*.

1. From the text to the phonemic transcription

text	phonemic transcription
a	*a*; *ā* sometimes (no rule)
ā	*ā*; *a* sometimes (no rule)
å (= *ā̊*)	*aʔah* (*hudåbyō*)
ånt	*aʔant*
åŋh	*āh*
-å	*-āh*; *-āu* (*xratå*, *pǝrǝtå*)
ås	*ās*
ḁ	*an* before *s*, *z*, *θ*
	ā before *-m*, *-n*
	ā before *m*, *-n* (rarely)
	a, *ā* before *nm*
ǝrḁš	*rnš*
b, β	*b*
c	*c*
d, δ	*d*
e	*a* after *y* before *i*, *ē*, *y*, *c* or *j* in the next syllable
ē	*-ai*
-yē	*-yā* (*paouruyē* /*parviyā*/)
aē	*ai*
ǝ	*i* (*zǝmō*), *u* (*drǝgvant*)
ǝn, *ǝm*	*an*, *am*
CǝC	*CC*
ǝvĭ	*avi* (*ai* in *cǝviš-*)
ǝrǝ	*r*
ǝ̄ǝ-	zero
-ǝ	zero (rarely)
ǝ̄	*aʔa* (*x́yǝ̄m*, *strǝ̄m-*); *a* (*vǝ̄stā*, *vātǝ̄yāmahi*)
ǝ̄ǝ-	zero
ǝ̄h-	*ah* (rarely)
ǝ̄m, *ǝ̄n*	*am*, *an*
ǝ̄ngh	see sub *g*
-ǝ̄ng	see sub *g*

	$\bar{\jmath}u$	au
	$-\bar{\jmath}$	$-ah$
	$-r\bar{\jmath}$	$-r$
f		f
g		g
	$\bar{\jmath}ngh$	anh
	$-\bar{\jmath}ng$	$-anh$
	$nghv$	hv
	ngr	hr ($angra$-, $dangra$-)
Υ		g
h		h
	ngh	see sub g
h'		see $\acute{x}$
h^v		see x^v
i		i; $\bar{\imath}$ sometimes (no rule)
$\bar{\imath}$		$\bar{\imath}$; i sometimes (no rule)
j, k, l,		j, k, l
m, $\underset{\circ}{m}$		m
n		n
	$ng(h)$	see sub g
$\acute{n}$ $\underset{\circ}{n}$		n
η $a\eta h$		ah
	ηhu, ηuh, $(n)\eta hv$	hv
	$\bar{\jmath}(n)\eta h$	anh
$\acute{\eta}$ $-\acute{\eta}h\bar{e}$		hai
η^v		not Gathic
o		a (after labial before a syllable with u)
	ao	au
$\bar{o}$		a (no rule); $\bar{a}$ (rarely); zero (for ∂, $\bar{\jmath}$; irregular)
	$\bar{o}i$	ai
	$\bar{o}ya$	aya
	$-\bar{o}$	$-ah$; $-a$ ($fr\bar{o}$, $ap\bar{o}$, $av\bar{o}$); $-a$- (in split words); $-\bar{a}u$ ($p\partial r\partial t\bar{o}$)
p, r, s		p, r, s
$\acute{s}$ ($=\check{s}$)		$\acute{s}$
$\check{s}$		$\check{s}$
$\underset{\cdot}{s}$ ($=\underset{\cdot}{\check{s}}$)		$\acute{r}t$, $-\acute{r}t$
t, $\underline{t}$		t
θ		θ
u		u; $\bar{u}$ sometimes (no rule)
$\bar{u}$		$\bar{u}$; u sometimes (no rule)
v ($=uu$)		v; u? (no rule)
w		see β

```
x                 x
x́   x́y           hy-´
xᵛ               hv(-),  hu?-  (no rule)
y   ( = ii)      y;  i?  (no rule)
z   ž            z,  ž
```

2. From the transcription to the text

phon. transcr.   text

a   *a*; *ā* sometimes (no rule)
                   c (after *y* before *i, ē, y, c, j* in the next syllable)
                   o (after labial before *u* in the next syllable); *ō* (rarely)
                   ə̄ (*və̄stā, vātəyāmahi*)

  -a   -*ō*, (*frō, apō, avō*)

  a?a   see *ā, å* (*hudåbyō*); *ə̄* (*x́yə̄m, strə̄m-*);

  a?ant   *ånt*

  aha   *aŋha*

  ah   *ə̄h* (before consonant; rarely)

  -ah   -*ō*; *ə̄* (rarely)

  ai   *aē* (mostly in open syllables); *ōi* (mostly in closed
                   syllables); -*ē*; *əvī* (*cəvīš-*)

  am, an   *ə̄m, ə̄n*; *ą* (before *s, z, θ*)

  anh   *ə̄ngh*; *ə̄(n)ŋh* (rarely)

  -anh   -*ə̄ng*

  anm   *ąnm*

  au   *ao*; *ə̄u* (gen. sg. -*ə̄uš*)

  -avan   -*aon*

  avi   *əvĭ*

  aya   *ōya* (rarely)

  -ayam   -*aēm*

ā   *ā*; *a* sometimes (no rule); *ō* (rarely)

  āh   *åŋh*

  -āh   -*å*

  ām, ān   *ąm, ąn* (rarely)

  -ām, -ān -*ąm, -ąn*

  ānm   *ąnm*

  ās   *ås*; *ås* (rarely)

  -āu   -*āu*; -*å, -ō* (rarely)

  -yā   -*yā*; *yē* (*paouruyē*)

b   *b*; β (after *θ*; before *ž*)

c   *c*

d   *d*; δ (after *x, f*)

f   *f*

g		*g*; ɣ (before *ž*)
h		*h*
	-hai	*-ŋhē*
	hr	*ngr* (*aṅgra-*, *daṅgra-*)
	hv	*nghv*, *ŋhu*, *ŋuh*, (*n*)*ŋhv*; *xᵛ* (rarely)
	hv-	*xᵛ-*
	hy-ʿ	*x́y*
i		*i*; *ī* sometimes (no rule); *ə* (*zəmō*)
	iʔ	*y*
	iyəm	*iyəm*, *īm*
ī		*ī*; *i* sometimes (no rule)
j, k, l		*j, k, l*
m		*m*; *m̥* (after *h*)
n		*n*; *ń* (before *i, y*); *ṇ* (before stop)
p		*p*
r		*r*
	CrC	*CərəC*
	Crnš	*Cərąš*
	ŕt, -ŕt	*ṣ* (= *š̥*)
	-ŕ	*hr* (before *k, p*)
	-r	*-rə̄*
s		*s*
ś		*š́* (= *ś́*)
š		*š*
t		*t*; *t̲* (word finally except after *s, š́*)
θ		*θ*
u		*u*; *ū* sometimes (no rule); *ə* (*drəgvant-*)
	uʔ	*v*
	huʔ-	*hv-*; *xᵛ-* (sometimes)
ū		*ū*; *u* sometimes (no rule)
v		*v* (= *uu*)
	-vai	*-vōi*, *uyē*
x		*x*
y		*y* (= *ii*)
z, ž		*z, ž*

3. Gatha-Avestan

Words are given in the form of the texts, with the phonemic transcription. (If the phonemic transcription is identical with the form of the text, it has not been given.) From verbs the root is given, with all stems occurring. The words in the lists on pp. 116ff have not been included (the lists are—retrograde—alphabetic themselves).

The order is that of the Latin alphabet, as follows: *a ā ą̇ ą b β c d δ e/ē ə/ā f g γ h i/ī j k m n y o/ō p r s š ṣ t ṭ θ u/ū v w x xᵛ y z ž*. Note that *ā* follows *a*, but that with the other vowels length is disregarded.

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N

4. Yasna Haptanghaiti

5. Late Avestan
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   not given.

6. Sanskrit
Only the verbal roots mentioned pp. 203-
   216 are given.