A GRAMMAR
OF GATHA-AVESTAN
DEDICATED TO

Maria C. Monna
CONTENTS

Preface .......................................................... xv
Bibliography ...................................................... xvii
Abbreviations ..................................................... xix
Introductory remarks .......................................... xx

I. THE METRE AND THE TEXT

1. Introduction .................................................. 1
2. The hymns ..................................................... 2
3. Metrical deviations from the norm ......................... 5
4. Conclusion .................................................... 8

II. THE PHONEMIC SYSTEM

1. Introduction .................................................. 10
2. The alphabet ................................................. 12
3. ♀ .............................................................. 14
4. χ .............................................................. 15
5. β, γ, δ ........................................................ 15
6. ξ .............................................................. 16
7. ᾱ .............................................................. 17
8. s and hr ...................................................... 17
9. y and ν ....................................................... 17
10. ng .............................................................. 18
11. γ .............................................................. 19
12. ā .............................................................. 20
13. ρ .............................................................. 22
14. ø, ů ........................................................... 24
15. e .............................................................. 31
16. ẽ .............................................................. 31
17. o .............................................................. 32
18. ò .............................................................. 32
19. ōi, āe, -ō .................................................... 35
    Appendix: ōi/āe in Avestan ............................... 38
20. ū, ao, -ō ..................................................... 40
21. The length of vowels ........................................ 41
    21.1 u, ū ..................................................... 41
    21.2 i, ũ ..................................................... 42
### CONTENTS

21.3 $a, \ddot{a}$ ......................................................... 44
21.4 $a, \ddot{a}$ ......................................................... 47
21.5 $e, \ddot{e}$ ......................................................... 48
21.6 $o, \ddot{o}$ ......................................................... 48
21.7 Conclusion ...................................................... 48
21.8 The length of final vowels ..................................... 49

22. The glottal stop, $?$ ............................................. 50

23. Epenthesis and prothesis ........................................ 51

24. The phonemic system of Gathic ................................ 51

25. Other deviations from the text ................................ 52
   25.1 Later developments ......................................... 52
   25.2 Editorial changes ........................................... 53
   25.3 Errors and unexplained changes ............................ 54

### III. THE ACCENT

1. $i$ ........................................................................ 55

2. $s, hrk, hrp$ ......................................................... 56
   21 Survey ............................................................ 57

22 Simplicia ............................................................. 58
   22a -ta- ............................................................... 58
   22b -ti- ............................................................... 59
   22c -tu- ............................................................... 59
   22d -ta- ............................................................... 60
   22e -tāt- ............................................................. 60
   22f -tar- ............................................................. 60
   22g Root nouns ....................................................... 60
   22h -a- ............................................................... 60
   22i Other ............................................................. 61

23 Compounds .......................................................... 61
   23a Determinatives in a verbal noun or adjective .......... 61
   23b Determinatives ending in a substantive .................. 64
   23c Bahuvrihis ....................................................... 64
   23d Governing compounds ....................................... 66

24 Forms not discussed .............................................. 66

25 Conclusions ......................................................... 66
   25a Simplicia ....................................................... 66
   25b Compounds ..................................................... 67

26 Date ................................................................. 68

3. Final conclusions .................................................. 69
## IV. HISTORICAL PHONOLOGY

1. Introduction ........................................................................................................ 70
2. The stops ............................................................................................................... 71
   21 General ............................................................................................................ 71
   22 The sounds ..................................................................................................... 71
   23 Palatalization .................................................................................................. 72
3. Clusters with a stop ............................................................................................. 73
   31 Stop + consonant ............................................................................................ 73
   32 Stop + stop ...................................................................................................... 74
      32a Dental + dental > st, zd ............................................................................ 74
      32b ̄k, ̄g + dental > št, šd ............................................................................. 74
      32c Labial + k > fš ......................................................................................... 75
      32d Aspirate + stop or s: Bartholomae's Law .................................................. 75
   33 Stop + s ............................................................................................................ 75
      33a Dental + s > s ......................................................................................... 75
      33b ̄k + s > š .................................................................................................. 76
      33c Labial, velar + s > + š (see 46) ................................................................. 76
      33d Aspirate + s (see 32d) ............................................................................ 76
   34 s + stop (see 41, 42) ....................................................................................... 76
      34a sk > s ....................................................................................................... 76
   35 Stop + resonant ................................................................................................ 76
      35a ̄k, ̄g + n > šn ............................................................................................. 76
      35b Av. zn > sn ............................................................................................... 76
      35c ̄k̄i > ̄i ......................................................................................................... 76
      35d dn > n? ..................................................................................................... 76
   36 Resonant + stop ............................................................................................... 76
      36a rl ............................................................................................................... 76
      36b nθ ............................................................................................................. 77
   37 Av. correspondences of Skt. kṣ, Gr. kt etc. ....................................................... 77
   38 Survey of the clusters ..................................................................................... 79
4. PIE *s .................................................................................................................. 79
   41 s = s initially before stop and n ..................................................................... 80
      41a sk > s ..................................................................................................... 80
   42 s = s after a before stop and n ...................................................................... 80
   43 s = s after dental (ts > s) ............................................................................. 80
   44 s > š after i, u, r, ̄k(w) ................................................................................ 80
   45 s > š in -ns after i, u, ů ............................................................................... 81
   46 s > š after labials and velars ......................................................................... 82
   47 s > h initially except before stop and n ...................................................... 82
CONTENTS

48 \( s > h \) after \( a \) except before stop and \( n \) .................. 82
49 \( s > h \) after \( an, am \) .................................................. 82
410 \( s > h \) word finally after \( a, \ddot{a} \) .................. 83

5. The PIE laryngeals ........................................ 83
51 Word initial laryngeal ........................................ 83
51.1 HC- ................................................................. 83
51.2 HV- ................................................................. 84
52 After consonant .................................................. 85
52.1 -CH (see 52.2) ................................................... 85
52.2 CHC ................................................................. 85
52.3 CHV ................................................................. 87
53 After vowel ....................................................... 88
53.1 -VH (see 53.2) ................................................... 88
53.2 VHC ................................................................. 88
53.3 VHV ................................................................. 89
54 After vocalic resonant ........................................ 92
54.1 \( \mbox{RHC} \) ......................................................... 92
54.2 \( \mbox{RHV} \) ......................................................... 93
55 Word final laryngeal ......................................... 93
55.1 -CH (see 52.1 = 52.2) ...................................... 93
55.2 -VH (see 53.1 = 53.2) ...................................... 93

6. Resonants ....................................................... 93
61 \( r \) and \( l \) .......................................................... 93
61a \( r > ar \) before \( \ddot{s}l? \) ........................................ 94
61b -\( C r > - C a r \) .................................................. 94
61c \( n \dot{r} > s \) .......................................................... 95
62 \( m \) and \( n \) .......................................................... 95
62a \( ms > nh \) (see 49) ............................................. 95
62b \( mr > nr ? \) ...................................................... 95
62c \( ins, uns > i\ddot{s}, u\ddot{s} \) (see 45) ................................. 95
62d \( m > a, am \) ...................................................... 95
62e \( n > a, an \) .......................................................... 95
63 \( i \) and \( u \) .......................................................... 96
631 Between consonants ........................................... 96
631a \( u\dddot{s}m > \dddot{s}m-? \) ........................................ 96
631b \( h\dddot{i}\ddot{s}C > x\ddot{s}C-? \) ........................................ 97
632 Between vowels ................................................ 97
633 After vowel before consonant: the diphthongs ......... 97
634 After consonant before vowel ............................. 98
634a \( du\dddot{i} > dbi \) ................................................... 98
634b \( \acute{k}u, \ddot{g}u > sv, zv > sp, zh? \) ................................. 98
634c Sievers' Law .................................................. 99
<table>
<thead>
<tr>
<th>CONTENTS</th>
<th>xi</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. PIE vowels</td>
<td>100</td>
</tr>
<tr>
<td>71 e, o and ē, ē</td>
<td>100</td>
</tr>
<tr>
<td>71a Brugmann’s Law</td>
<td>100</td>
</tr>
<tr>
<td>8. Word-final developments</td>
<td>101</td>
</tr>
<tr>
<td>81 Vowels and diphthongs</td>
<td>101</td>
</tr>
<tr>
<td>81a Long and short</td>
<td>101</td>
</tr>
<tr>
<td>81b Long diphthongs</td>
<td>101</td>
</tr>
<tr>
<td>82 Consonants</td>
<td>101</td>
</tr>
<tr>
<td>821 -l</td>
<td>101</td>
</tr>
<tr>
<td>821a Velar + l</td>
<td>101</td>
</tr>
<tr>
<td>821b Dental + l, -st</td>
<td>102</td>
</tr>
<tr>
<td>821c -rt</td>
<td>102</td>
</tr>
<tr>
<td>821d -nt</td>
<td>102</td>
</tr>
<tr>
<td>822 -s</td>
<td>102</td>
</tr>
<tr>
<td>823 -H</td>
<td>103</td>
</tr>
<tr>
<td>824 -r, -l, -m, -n</td>
<td>103</td>
</tr>
<tr>
<td>9. General processes</td>
<td>103</td>
</tr>
<tr>
<td>91 Assimilation</td>
<td>103</td>
</tr>
<tr>
<td>92 Reduction of geminates</td>
<td>103</td>
</tr>
<tr>
<td>93 Haplology</td>
<td>103</td>
</tr>
<tr>
<td>V. COMPOUNDS</td>
<td></td>
</tr>
<tr>
<td>1. Governing compounds</td>
<td>104</td>
</tr>
<tr>
<td>11 1m = verbal noun/stem</td>
<td>104</td>
</tr>
<tr>
<td>12 1m = preverb</td>
<td>104</td>
</tr>
<tr>
<td>2. Determinatives</td>
<td>104</td>
</tr>
<tr>
<td>21 2m = verbal noun/adjective. Stem in root (+ l); -a-; -ti-; -la-; -ah-; other suffixes; participle</td>
<td>104</td>
</tr>
<tr>
<td>22 2m = substantive. 1m = substantive; adjective; preverb; adverb</td>
<td>107</td>
</tr>
<tr>
<td>23 2m = adjective. 1m = substantive; adjective; adverb</td>
<td>108</td>
</tr>
<tr>
<td>3. Bahuvrihis. 1m = substantive; adjective; preverb; adverb</td>
<td>108</td>
</tr>
<tr>
<td>VI. THE NOUN</td>
<td></td>
</tr>
<tr>
<td>1. Introduction</td>
<td>110</td>
</tr>
<tr>
<td>11 Noun and adjective</td>
<td>110</td>
</tr>
<tr>
<td>12 Categories</td>
<td>110</td>
</tr>
<tr>
<td>13 Stem-classes and ablaut-patterns</td>
<td>110</td>
</tr>
<tr>
<td>14 The endings</td>
<td>111</td>
</tr>
<tr>
<td>2. Inflection</td>
<td>113</td>
</tr>
</tbody>
</table>
21 Root nouns .......................................................... 113
22 Stems in a PIE laryngeal ........................................ 115
23 s-stems .............................................................. 116
24 t- and nt-stems .................................................... 118
25 n-stems .............................................................. 118
26 r- and r/n-stems ................................................... 120
27 i- and u-stems ...................................................... 122
28 i̯- and ā-stems ..................................................... 124
29 ā-stems ............................................................... 126
210 a-stems ............................................................. 128
3. The adjective ......................................................... 130
   31 Introduction ..................................................... 135
   32 Flexion ........................................................... 135
   33 Stem-formation ................................................ 135
   34 Comparison ...................................................... 135

VII. THE PRONOUN

1. Personal pronouns ................................................. 137
2. Possessive pronouns .............................................. 138
3. Demonstrative pronouns ....................................... 139
4. Relative pronoun .................................................. 140
5. Interrogative and indefinite pronouns ....................... 140
6. Pronominal adjectives .......................................... 142

VIII. THE NUMERAL

Cardinals, ordinals ................................................. 143

IX. INDECLINABLES

1. Alphabetical list .................................................. 144
2. Categories .......................................................... 147
   21 Adverbs ........................................................ 147
      21.1 Analysable forms ....................................... 147
          21.1a Case forms ......................................... 147
          21.1b Suffixed forms ...................................... 148
      21.2 Unanalysable forms ...................................... 148
   22 Prepositions, preverbs ...................................... 148
   23 Connectives ...................................................... 148
   24 Negations ....................................................... 149
   25 Particles ........................................................ 149
   26 Interjections .................................................. 149
## CONTENTS

**1. The verbal system** .......................................................... 150
**2. Augment** ........................................................................ 150
**3. Reduplication** ............................................................... 151
**4. The endings** .................................................................. 153
**5. The subjunctive** ............................................................. 155
**6. The optative** ................................................................... 159
**7. The athematic presents** .................................................. 161
  7.1 The root present ............................................................ 161
     7.1a Static inflection ....................................................... 164
  7.2 Reduplicated presents ................................................... 166
  7.3 Nasal presents .............................................................. 167
**8. Thematic presents** ......................................................... 169
**9. The aorist** ....................................................................... 175
  9.1 The root aorist .............................................................. 175
     9.1.1 Root aorists of roots in -a? ..................................... 179
  9.2 The thematic aorist ....................................................... 181
  9.3 The s-aorist ................................................................. 182
**10. The perfect** ..................................................................... 186
**11. The future** ...................................................................... 187
**12. The passive** .................................................................... 188
  12.1 Passive presents ......................................................... 188
  12.2 Passive aorists ............................................................ 188
**13. Derived conjugations** ................................................... 188
  13.1 Causatives .................................................................... 188
  13.2 Desideratives ............................................................... 188
  13.3 Intensives ..................................................................... 190
**15. Non-finite verb forms** .................................................... 191
  15.1 Participles ...................................................................... 191
     15.1a Present, aorist, future participles ............................... 191
     15.1b Perfect participles ................................................... 194
  15.2 The verbal adjective ...................................................... 194
  15.3 The gerundives ............................................................. 195
  15.4 The infinitive ............................................................... 195
     -dyāi ........................................................................... 196
     -ah ............................................................................. 198
     -ai ............................................................................. 198
     -tai ........................................................................... 198
     -hai, -sai ................................................................... 199
     -manai ....................................................................... 199
     -vai .......................................................................... 199
-vanai ................................................................. 199
Other forms .......................................................... 199
16. Verb forms of uncertain interpretation ......................... 200
17. The verbal system compared with Sanskrit ..................... 200
  17.1 Introduction .................................................. 200
  17.2 Results ........................................................ 201
  17.3 List of roots .................................................. 203
18. Reverse index of verbal roots ..................................... 216
  18.1 Reverse index ................................................ 216
  18.2 Total numbers ................................................. 219

Corrections to the index given by Monna .......................... 219
Indexes ................................................................. 223
  1. From the text to the phonemic transcription ................ 223
  2. From the transcription to the text ............................ 225
  3. Gatha-Avestan .................................................. 227
  4. Yasna Haptanghaiti .............................................. 240
  5. Late Avestan .................................................... 241
  6. Sanskrit .......................................................... 241
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 prob-
lems 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 hand-
book, 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 interpreta-
tion. 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 Gāthic 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 Gāthic 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 Gāthic 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 Gāthic material. Here all Avestan material should be taken together, which would take a full volume. I have given retrograde lists of all nouns, so that the material is in any case easily accessible. 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, especially 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.

I am grateful to E. J. Brill Publishing Company for their careful printing.

University of Leiden

Robert S. P. Beekes
BIBLIOGRAPHY


Bartholomae, Chr. 1904. Altiranisches Wörterbuch. Strassburg.


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.; NAp-n = 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. य, often inserted in clusters, does not count as a syllable for the metre: वाचोर-, गौन. Sometimes such a vowel was coloured to a (कारपन- = करपन-/; ज्याहना-; दाइकी- with additional इ-epentheses was monosyllabic), to इ (माजीकी) or to ए (गारबी).

2. । रा was monosyllabic. (Sometimes it appears as एरा: मोरंदा.)

3. ओ- before ए must be neglected: ओनुन दामु.

4. इ- before रि- and उ- before रु-, रु- mostly did not form a syllable (िरिंटा-, उरुआस्त, उर्वाता-; but उरुराए- was /ɨrurāʔ-/). This applies also to the इ- of ई.day.la.

5. -यु- did not form a separate syllable; it indicated something like [ŋu]: अनुशिकट लहुशिकट.

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

7. -म, -ुम sometimes stands for -ियम, -उम.

8. -स- can stand for -सा- (कर्नाon); in the same way -ा- can stand for -या- (दाँना = दयाना; गाँम = गयाम्ल; वांम = /vayaml/).

9. -टआल- represents -ट (rare; यात, विराल).

10. Contractions have occurred that did not belong to the original text: आयी /ā iyail, आइ /ā iail. Note फ्रोयट /fra ayail.

11. Laryngeals, or their representative (here written ਗ), explain a large number of deviations. They are discussed in ch. IV. They concern cases where ए was disyllabic, or where य, उ represent a syllable. Some of these cases were long since known, e.g. the gen. pl. ending -ाम = /-aʔaml/.

12. An older form of the dative singular ending of the र-stems, -ाया, must sometimes be reconstructed.

13. -दुये, 2p middle ending, still was monosyllabic (/dual/).

14. Compounds did not contract two (apparently) adjacent vowels: वि.स्पा- was /vishat.spa-/ (Probably they contained a glottal stop; see IV 51.2.)
15. The following words must have had a more archaic shape: ārmaitiś was laramaiś; diwamna-/dyumna-/; jiwa- was ljīwa- and jōya- /jūviya/-; cvitiś- was laiś-/; from the root ciś-. For dužazōba, which has a and ē for r, 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 asā [aibī] vaenahi. Other cases are less certain, like mazdā in 28.9a, or ca in 30.3b manahi [cā] vacahi 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 rajbrahya
2b 7-9 ahu्रāh
3a yah [vāh] arta uʃyaɾāni?
4c xsaɾāi
5b ?7-9? ahurai <a> ?; saviʃtai <a> ?
9a 7-8 zarnaima
10c 7-9
29
1b 7-9? [ramah] ā hiʃāya drś ca taviś ca? (/ramah/ a gloss?)
1c aθa; [maï]?
4c 7-9/10 aθa; [nah]?
6c buriʃa
8c dyaɾāi
9a xanmanai
30
1b ?7-9? ahurai <a> ?
1c arṭāya ca; vṛāṣa?
3b 8/7-8 śyaunai
3c aɾāṣ?
4b 7-10 yaba
5a manyuɾāh varta
7a 7-8 manahā vahu arlā ca
11a saʃyaba
31
2b iɾai
6b 7-8 amṛiṭatas
7a 7-8 raibvan
8c 7-8 śyaunaiʃu
THE METRE AND THE TEXT

9a 7-9 a?as; ašxratuš
10a varla
15b 7-9 duššyauññai <a>?
20c 7-8 šyauññaiš
21a 7-8 amrtātas ca
22b 7-8 šyauñnā
32
2c varmaid
4b 7-8 siždyamnā
5a 7-8 <ā> dbnauta?; amrtātas
6b 7-8 hālamarmai ahura vahišīa 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 ra>rinya?an
12a 7-8 šyauñnāt
12c varla
13c 7-8/9 dūlam; pāt/pa>at
16c ōhayā
33
2c 7-9 varāi <a>?
3a 7-8/9 vrzan(i)yah
7a īdvam
8a šyava?āi
12a aršva?
12c 7-8 fsratu?am
34
8b ašaujāh
12c 7-8? hva?itanh?
15a 7-8 šyauñnā
43
3d ā śaiti
7e tanūši
8e uʃya?ā [ca]? Cf. 9e.
10c ahma/ahmāi; prštā?
10d prštām?
12c uz i>r̥dyāi
13d darši? (see IV 821b)
14d 4-7 uz i>r̥dyāi; az sardanāh
44 3d 4-7 ma?ah
20d anmanai
45
3b yām
46
1c ?4-7 mā <ā> ?; urzanā hacāpā
5a ā yanlam
47
4a ra?riyanti
48
6b 5-7 da?at
6d 5-6 ahurah ahauś  zarbai parviyahya (Same remark as on 32.6b.)
9a vaidā
49
2b 4-7 ra?rśah
2c darśt? (see IV 821b)
4c yaiša?am
50
7d za?atha?
51
2a artāya ca
4a fsratiś
11a ?7-7 Spitamāi <a> ?
53
2a 8-5 āt ca
3b 7-5 dugdrām (see on 8c)
3d 8-7-5 aha
6d 7-7-4 mrgdvaï
7c 8-7-5 parā ca; ā nansal
8c 8-7-5 janrām xunrām ca

The gen. ending could be -ām- as well as -a?am, and either jiṃram or xrūṃram has been considered as a gloss (in which case ca must be deleted as well). This gives the following possibilities:
janrām xunrām ca 10 syll.
janrām xunrām ca 8
janrām — 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
  5a 7-8
  5b 6/7-8/9
  6a 7-9/10
  6c 7-8/9/10
  7a 7-8
  9a 7-8
  10a 7-8

28.1b 6/7-9
  2c 7-9/10
  3b 7/8-8
  4a 7-8
  4b 7-10
  5a 7-8
  7a 7-8
  7b 7-8
  7c 7-8
  8c 7-10
  9c 7-8

29.1b 7-9/10
  1c 7-9/10
  4c 7-9/10

15b 6/7-9
17c until 21b

7-8 (12 x)

22a 7-8
22b 7-8
22c 7-8

30.1a 7-8
  10b 7-8

30.2a 7-8
  15b 6/7-9
  17c until 21b

12b 7-8

31.2a 7-8
  22a 7-8

31.2b 7-8
  22b 7-8

32.1a 7-8
  22c 7-8

32.2a 7-8
  34.1a 7-8

32.2b 7-8
  11a 7-8

33.10a 7-8

33.2a 7-8

33.2b 7-8

34.1a 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:

<table>
<thead>
<tr>
<th>norm</th>
<th>7</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td>1 + 5? (0,3-2%)</td>
<td>85 + 6? (28,3-30%)</td>
</tr>
<tr>
<td>+1</td>
<td>1 + 3? (0,3-1,3%)</td>
<td>6 + 8? (2-2,6%)</td>
</tr>
<tr>
<td>total</td>
<td>2 + 9? (0,6-3,6%)</td>
<td></td>
</tr>
</tbody>
</table>

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 except 5a-7a, where we find lines of 5-6/7. Such a cluster cannot be a coincidence: it must be deliberate. We shall not, therefore, consider these lines as a problematic (and not count them in what follows). Note that there are no other instances of 5, except perhaps in 44.12e.

The totals are as follows:

<table>
<thead>
<tr>
<th>norm</th>
<th>4</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>-1</td>
<td>12 + 1? (2,6-2,8%)</td>
<td>7 (1,5%)</td>
</tr>
<tr>
<td>+1</td>
<td>1?</td>
<td>1 + 3? (0,2-0,8%)</td>
</tr>
</tbody>
</table>

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% chance of being correct.

Y 51
Norm line 7-7. Deviations are:

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

It is probable that all lines conformed to the norm. 11a may have had Spitamāya(a). 19c is quite unclear. If mazedā 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 sequences 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 unacceptable.

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]? (cf. sprdā ni)
4b 7-7/8-5
5b 6/7-5 it is ununderstandable why the text does not have 'yušnabya.

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:

\[
\begin{array}{c|c|c}
\text{norm} & 7 & 5 \\
-1 & 1 + 1? & 0 \\
+1 & 1? & 0 \\
+2 & 1? & (5,5-16,6\%) \\
\end{array}
\]

\[
\begin{array}{c|c|c}
\text{norm} & 7 & 5 \\
-1 & 0 & 1 \\
+1 & 3 + 3? & 1 \\
+2 & 1? & (16,6-22,2\%) \\
\end{array}
\]

(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 manuscripts 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 Gāthic 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 tradition 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
THE PHONEMIC SYSTEM

/daeyanā/, 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 Gothic 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 Gothic. 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 Gothic and Late Avestan. It cannot be stressed sufficiently that the following treatment is valid for Gothic only. Morgenstierne for example, objects to Benveniste's rendering as /byaajahvati/ what appears in the text as /byaajahwati/. Morgenstierne interprets this form as phonetically /yejanh'ati/, phonemically /byejanhwati/. This is an instructive example. Morgenstierne's reconstruction is probably meant for (some stage of) Late Avestan. For Gothic (where the form is not found; but let us assume for a moment it occurred there), I think we can demonstrate that /ya/ had not yet become /ye/, and that /hv/ had not yet changed, so that /byaajahvati/ would be the correct phonemic interpretation. This shows that the phonemic reconstruction given here is valid for Gothic only.

In this chapter, then, we have to establish the phonemic system of Gothic, 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 Gothic 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 *g, and the diptong *ai/aí, *au/aó, there is no reason to consider sequences of signs.

The alphabet indicates the following sounds:

\[
\begin{align*}
k & g & c & x & \phi & x' & x'' & \epsilon & \eta & \lambda & \theta & \rho & \sigma & \tau & \upsilon & \varphi & \chi
\end{align*}
\]

1. Formerly *h, *h.
2. Sometimes written *xvi; *xv always represents the sign *xv.
3. Formerly *w.
4. The sign is transcribed *s, as it is a variant of *s; I propose to write *s as this is typographically easier.
5. This sign is transcribed $s$; I propose to simplify this to $s$.
6. On the transcription see §9.
7. Only used initially.

Not included are a few rare signs:

$\dot{g}$ of unknown value;  
$\dot{\delta}$ graphic variant of $\delta$?  
$\dot{a}$ had two signs, $\ddot{a}$ and $\dddot{a}$. As the first only occurs in one manuscript (Pd), the other sign is transcribed simply by $\ddot{a}$;  
$\dot{q}$ a variant of $q$ of unknown use;  
$\dot{j}$ a variant of $y$.

A large number of sounds must be discussed:

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

$x^u$ see §4.

$\beta$, $\gamma$, $\delta$ see §5.

$t$ is a variant of $t$; see §6.

$\dot{s}$ see §7.

$\dot{s}$ see §8.

$\gamma$, $\nu$ and $\gamma^-$, $\tau^-$ see §9.

$\eta \ m$ which had become voiceless after $h$

$\eta^i$ phonetic variant of $n$ before $i, y$.

$\eta$ nasal before stops;

$\nu$ see §11.

$\dot{\eta}$ variant of $y$ before $\ddot{a}$ in Gathic (only -$\ddot{a}$hvē, -ye$\ddot{a}$hē). As Gathic had /-ail/ instead of -$\ddot{e}$, the $\dot{\eta}$ is not relevant.

$\nu^v$ is not used in Gathic proper; YH has va$n^h$him, va$n^h$hiś, acc. sg., pl. fem. of vo$\ddot{h}u$ 'good'. (For the latter Gathic has va$n^h$uhim.) See on ngu and $\nu^h$u in §§10 and 11.

$\ddot{a}$ see §12.

$a$ see §13.

$x, \ddot{s}$ see §14.

$e$ see §15.

$\ddot{e}$ see §16.

$\dot{o}$ see §17.

$\ddot{o}$ see §18.

$\ddot{a}, a^e$, -$\ddot{e}$ see §19.

$\ddot{u}, a^o$, -$\ddot{o}$ see §20.

On the length of the vowels $a, i, u$ see §21.
The phonemic system

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

\[
\begin{array}{cccccccc}
\theta & b & f & m & v & u & \ddot{u} \\
\epsilon & d & \theta & n \\
\epsilon & j & \ddot{z} & y & i & \ddot{i} \\
\rho & h & a & \ddot{a} \\
\end{array}
\]

On the \( \rho \) see §22.

The group \( s, z, \ddot{s}, \ddot{z} \) consists of four phonemes.

\( z \)

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

\[
\begin{align*}
\text{zarem} : & \text{sar}m, \text{zaos}a : \text{saosyant}, \text{zavah} : \text{sava}h, \text{zrazd}a : \text{stava}h, \text{zu} : \text{s}u ; \\
\text{azm} : & \text{as}m\ddot{\text{o}}, \text{ma}z\ddot{\text{o}} : \text{pas}\ddot{\text{u}}s, \text{goronzoi} : \text{xos}ng.\text{darsoi}, \text{grzai} : \text{darsa}i, \text{gu}zr\ddot{\text{a}} : \text{us}n\ddot{\text{a}}, \text{hizv}a : \text{i}\ddot{s}\ddot{\text{e}}, \text{i}sv\ddot{\text{a}}. \\
\end{align*}
\]

The historical origin is the development \( \text{PIE} \, k > s; \, \ddot{g}, \, \ddot{gh} > z. \)

\( \ddot{s} \)

\( \ddot{s} \) is not an allophone of \( s \). Compare:

\[
\begin{align*}
\text{i}\ddot{s}a\ddot{l} : & \text{i}\ddot{s}a\ddot{i}, \text{vi}\ddot{s}\ddot{\text{i}}\ddot{s}p\ddot{a} : \text{vi}\ddot{s}p\ddot{a}, \text{zoi}i\ddot{m}\ddot{u} : \text{moi}\ddot{s}, \text{va}\ddot{\text{e}}\ddot{s} : \text{urva}e\ddot{s}, \text{zaos}a : \text{xraosn}l\ddot{\text{a}}, \text{ra}z\ddot{n}a : \text{yas}n\ddot{a}, \text{f}\ddot{s}\ddot{u}y\ddot{\text{ant}} : \text{f}\ddot{s}\ddot{\text{s}r}a\ddot{u}\ddot{\text{s}}. \\
\end{align*}
\]

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

Note that initial \( \ddot{s}- \) became \( \text{xf}- \). As this development is automatic, it can phonemically be noted as \( /\dddot{s}/ \).

\( \ddot{z} \)

\( \ddot{z} \) is not an allophone of \( z \), as appears from:

\[
\begin{align*}
\text{a}\ddot{zu}\ddot{u} : & \text{az}\ddot{u}i\ddot{u}i\ddot{s}, \text{a}\ddot{z}d\ddot{y}a\ddot{i} : \text{a}\ddot{z}d\ddot{a}, \text{va}\ddot{\text{z}d}r\ddot{a} : \text{va}\ddot{\text{z}d}r\ddot{a}, \text{v}o\ddot{\text{i}z}d\ddot{a} : \text{v}o\ddot{\text{i}z}d\ddot{u}m. \\
\end{align*}
\]

The historical explanation is the development \( \ddot{g}d > \ddot{zd} \) and \( \ddot{dd} > \ddot{zd} \).

3. \( \dddot{x} \)

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 Gothic, if it was not post-Gothic, so that \( \dddot{x} \) was not a phoneme but an allophone of \( h \).
4. \(x^v\)

As \(-hv-\) is everywhere else preserved, \(nəmaxwəi̯ti̯k\) and \(səxvər̲i̯\), \(səxvən̲i\) should probably have been written with \(hv\) (duš.\(xvər̲ə̯m\) has \(x^v\) from the simplex.) Elsewhere \(x^v\) is found only initially.

We find \(x^v\) and \(hv-\) thus:

\[
\begin{align*}
\text{\(x^v\)-} & < \text{\(hv\)-} \\
x^və- & \rightarrow x^vər̲ə̯- /hu̯ar̲ə̯bi̯a-/ \\
x^vəɛ̯la- & \rightarrow x^vəd̲ə̯ra-/hu̯ar̲ə̯bi̯a-/ \\
x^vəɛ̯tu- & \rightarrow x^vəd̲r̲ə̯y̲a-/hu̯ar̲ə̯ray̲al? \bigg| \text{\(x^v\)-} & < \text{\(hu̯\)-} \bigg| \text{\(x^v\)-} & < \text{\(hu̯\)-} \\
x^vəfna- & \rightarrow x^vəŋ /hu̯ar̲ə̯nh/ \\
x^vəl̲ə̯d̲ya- & \rightarrow x^viti-/hu̯iti-/ \\
x^vər̲ & \rightarrow x^vər̲ə̯ /hu̯ar̲ / \\
x^vər̲ə̯θ̲a- & \rightarrow x^vər̲ə̯ /hu̯ar̲ / \\
x^vəp̲a̯l̲ə̯d̲ya- & \rightarrow x^vəp̲a̯l̲ə̯ /hu̯ar̲ / \\
x^və̯na- & \rightarrow x^və̯n̲ /hu̯ar̲ / \\
x^vər̲ə̯nu̯h\end{align*}
\]

The last two words (\(x^və̯n̲a-\) etc.) have no etymology. The forms with \(hu̯\) are not relevant, as they had \(l̲au̯\)- in Avestan.

PIE \(su\)-, Ir. \(hu\)-, always gave \(x^v\) (and so written \(hv\)- always represents \(l̲u̯\)-). This means that there is no problem for Gathic. There were forms with \(l̲u̯\)- (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 \(hu\)- (that is \(l̲u̯\)- 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 \(l̲u̯\)- before laryngeal became \(x^v\)- and when it became \(hu\)-. If the accentuation of the PIE word for 'sun' was \(*su\d̲a\d̲r\) (Skt. \(sv\d̲r\)), gen. \(*su\d̲a\d̲n\d̲s\), the accent might have been the decisive factor, cf. \(hu̯ar̲\), gen. \(x^vəŋ\).

5. \(\beta, \gamma, \delta\).

\(\beta, \gamma, \delta\) are voiced spirants. They are found in Gathic:

1. after voiceless spirants (\(f, θ, χ\));
   a. \(θβ < θv\);
   b. \(xδ, fδ < xθ, fθ\).

\(\gamma\) is not found in this position in Gathic;

2. \(βz, γz < bz, gz\) (\(z\) from \(z\) after labials and gutturals).
Ad 1a.
xraθβā < *xṛatā, Is. of xṛatu-; ḍβα- ‘worthy’ (cf. Skt. tvam?); ḍβα- ‘your’ (Skt. tvā-); ḍβαśah- ‘care’ (Skt. tvākṣa-).

Ad 1b.
uxdā- ‘word’ (Skt. ukthā-); vaxdhra- ‘speech’ < *vaxdha- < *vak-trā-; ḍvṛōi
Ds. of ‘father’ from *ṛhrai < *prāi.

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

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

Ad 2. (β, γ before ḍ)
All forms are the result of Bartholomae’s law.
diβžaidyai < -bza- < -bh-sa-, a desiderative in -sa-;
mimazgō < -gza- < *mi-minh-sa-, desid.;
pairyagσ̄ < *-augh-sa ‘you said’. On ayjazavamne- see IV 37.

Conclusion. βž, γž are allophones of bž, gž. In the same way xθ, fθ are allophones of xḍ, fḍ. They can only be considered as allophones of xḍ, fḍ (as Morgenstierne proposes) after intervocalic d had become ḍ, but this is a Late Avestan development. θβ is an allophone of ḍv. Though β also occurs before ḍ, a phoneme θ that occurs only before or after specific consonants is impossible. There were, then, no phonemes β, γ, ḍ.

6. ḍ

- is a variant of t, found:
1. in word final position;
2. in ɪkaēša- ‘false faith’ and ‘teacher of’.

Ad 1.
nōt, mōīt, frarag, paityagag, etc.
It is not found after s or ḍ: mōist, cōišt, tāšt.

Ad 2.
On ɪkaēša- 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. ḍb- 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, ḍ.

Of course, ḍ is an allophone of t.
7. ś
ś continues.
1. c before ś;
2. the sound traditionally reconstructed as ḷḥ (see IV 37).

Ad 1.
syaob(a)na- 'work' (Skt. cyautna-); śyavāi 1st sub. of śyu- 'activate' (Skt. cyāvati).

Ad 2.
sōībra- 'dwelling place' (Skt. ksētra-).
The ś in 1. can be considered as an allophone of ś before y. Later śy became single ś. At that moment ś was a phoneme, but this development is post-Gathic as it is still often written śy.

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

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

8. s and hr
These sounds are discussed in the chapter on the accent. s 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 s was not a phoneme (nor was hr). It will be described as rt or -rt etc.

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

Gathic had in these cases [i, u], but sometimes [iː, uy] (These forms actually had ɨ, u except when i, u were due to Sievers' law, see IV 634c.) Recently it had been suggested to transcribe with i, 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. ui (uy) must stand for *uui (uy), 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 $i^\prime$, $u^\prime$ are written with special signs. $ii^\prime$ and $uu^\prime$ also occur initially, representing $i^\prime$, $u^\prime$, not $i^\prime$, $u^\prime$. 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 $ii^\prime$, $uu^\prime$ should be used.)

10 ng

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

$ng$ is found in:
1. -$\ddot{\text{on}}\text{g}$
2. $\text{ngh}$
3. $\text{ngr}$

Ad 1.

PII -$\text{ang}$ - > PIr. -$\text{anh}$ - appears as -$\ddot{\text{on}}\text{g}$, word final -$\ddot{\text{on}}\text{g}$.

$s\ddot{\text{on}}\text{gha}$ - ‘teaching’, Skt. $\ddot{s}\ddot{\text{a}}\ddot{\text{n}}\text{s}$.

$v\ddot{\text{on}}\text{ghat}$ s-aqr. sub. of $\text{van}$, Skt. $\text{vam}sa\ddot{\text{t}}$.

$d\ddot{\text{on}}\text{g}$ Gs of $\text{dam}$ - ‘house’.

- $\ddot{\text{on}}\text{g}$ Ap ending of the a-stems.

In this case Gāthic has consistently ngh, whereas LAv. has $y$ (which is found sometimes as a variant in the Gāthās); ($n\ddot{\text{on}}h$ is a mixed form). The forms are:

$f\ddot{s}\ddot{\text{on}}\text{ghy}\text{a}$

$j\ddot{\text{on}}\text{ghat}\ddot{i}$ (gam-)

$m\ddot{\text{on}}\text{gh}\ddot{i}$ $m\ddot{\text{on}}\text{gh}\ddot{\text{a}}$ (man-), $m\ddot{\text{on}}\text{gh}\dd\dot{\text{a}}$

$s\ddot{\text{on}}\text{gha}$, $s\ddot{\text{on}}\text{ghu}$

$v\ddot{\text{on}}\text{gh}$, $v\ddot{\text{on}}\text{gh}$

$c\ddot{y}\ddot{\text{on}}\text{ghat}$ (with $\dddot{a}$ for $\ddot{a}$ after $y$)

Final $d\ddot{\text{on}}\text{g}$, $x\ddot{\text{on}}\text{g}$, Ap. -$\ddot{\text{on}}\text{g}$ (on $\dddot{y}\dddot{\text{on}}\text{g}$st $\ddot{u}$ see 14.8b), $\text{ca} s\ddot{\text{on}}\ddot{\text{m}}\ddot{\text{n}}$.

The consequent distinction between ngh < ns and $y$ < $s$, which is not found in LAv. (which has only $y$), indicates a Gāthic reality. A further difference between the two cases is found in the preceding vowel: we find always -$\ddot{\text{on}}\text{g}$ - but -$\ddot{\text{an}}h$ -. The $\ddot{a}$, as well as the notation with an $n$, shows that Gāthic here still had a nasal. Therefore, ngh can be interpreted as the phonetic representation of the phonemic sequence /nh/.

Word final -$\ddot{\text{on}}\text{g}$ is more difficult. It seems not advisable to assume a separate phoneme for this ending. Therefore I interpret it as /$\dddot{\text{an}}h$/, assuming that -$h$ had not yet disappeared. (If it had disappeared, one might interpret -$\ddot{\text{on}}\text{g}$ phonemically as /$\dddot{\text{an}}g$/, just as the spelling indicates; in Gāthic there is no reason to identify $ng$ with $y$.)
Ad 2. (nghv)

We shall see that this sequence indicated Gathic -hv-. This group is mostly written yuh, (n)ghv, 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 è from a, the ng is probably hyper-Gathic spelling (ng being typically Gathic) for (Lav.)* (d)angra-. The words may be interpreted as /(d)ahra-/.

11. y

y is found:
1. in -agh-a-, aghu- and -āgha-;
2. in yuh-V, yhu-C, yhu, nghu;
3. in ēyā, ēnyā.

Ad 1.

aghā < *aha (and āgha < āha) is regular:
Gs managhō, Is managhā from manah-, but manahi; anghaṣ sub. of ah- 'to be'; ēṅhā < *āh-as Gs 'mouth'; aghaṣ- 'lords', but ahu.
This development is older than au > ū (vaŋhūṣ Gs 'good'), -ai > -ē (nipāṅhē < *-pāhai 'you protect'). Note rāśayēṅhē with ya > ye after -ai had become -ē (on yh see §2).

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

The forms of vahu- 'good' are instructive:

<table>
<thead>
<tr>
<th>NAs</th>
<th>n. vohū 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>vaŋhūṣ passim</td>
</tr>
<tr>
<td>D</td>
<td>vaŋhaovē 1</td>
</tr>
<tr>
<td>I</td>
<td>vohū passim</td>
</tr>
<tr>
<td>L</td>
<td>vaŋhau 5</td>
</tr>
<tr>
<td>Ap</td>
<td>vaŋhūṣ YH 1</td>
</tr>
<tr>
<td>G</td>
<td>vohunam YH 1</td>
</tr>
<tr>
<td>Cf.</td>
<td>vaŋhūdā YH.</td>
</tr>
</tbody>
</table>

We find both vohu(-) and vaŋhū-. Evidently the forms that got yh before u did not get o from a. On the other hand, where a had become o, the yh was never introduced. This means that some forms became vaŋhū- and that the forms that had remained vahu- later became vohu-. As it is very improbable that yh was secondarily introduced in some forms of vahu- and not in others, Gathic will have had vahu- everywhere, which was later
either changed into vayhu- (which probably was never a linguistic reality) or into vohu- according to a later regular phonetic development.

Ad 2. (yhu etc.)
ayuhis-ca /ahuśi/ Npf of ahu- ‘lord’;
vaŋhyām, vaŋhyā /vaŋhiyam, -iŋ̣ā/ fem. of /vahu- ‘good’;
aŋōhvantam /auaŋhvantam/ (cf. aŋōŋhvāt);
cazdōŋhvadbyō /cazdahvad-/ (cf. cazdōŋhvantom).
Evidently yu-h-V and vhu-C are attempts to express one soundgroup, for which (later) also yhu was used, with one sign for a labialized y. The metre shows that yuh/yhu was non-syllabic.

In Gathic -kv-, which these spellings continue, was still retained, as appears from ahuḥa Lp of ahuā, gušahvā imp. M., ahuā from ah- ‘to be’, miōahvaca ‘whose words are false’. Therefore the spellings with y are a later intrusion.

Ad 3. (īph)
īph, śīph are alternatives for normal śīph; see §10.
Conclusion If *aha > aŋha is already Gathic, yh is an allophone of h between ā’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. ā
ā is found:
  1. in -āgh-
  2. final -ā
  3. -ās-cā etc.
  4. in hudābyō
  5. in -ānt-
  6. xratā, porštā

Ad 1.
-āgha- continues *-āha-. (Forms in -ō, -ōi, -ē had earlier -ah, -ai.)
stāŋha 3sg sub. s-aor. of stā-, < *stā-h-at.
rāŋhayhoi 2sg sub s-aor. M of rā-, *rā-h-a-hai.
dāŋha 2sg ind. aor. M of dā-, *dā-ha.
-āgho Np of a-stems: ahurāŋghō, maśyāŋghō.
s-stems: Gs dāŋghō, yāŋghō.
nipāŋghō 2sg ind. pres. M of pā-, *-pā-hai.

Ad 2. (final -ā)
ā < *-āh < *-ās is very frequent and without exception.
NApf of ā-stems: aspā, daēnā, gaědā.
NAPn of s-stems: dvaēśā, manā, raocā.
Nsmf of s-stem adjectives: aojā, vudvā, hvāpā.
dadā, dā 2sg pres., aor. of dā.
A few forms in -ā had disyllabic -ā: dā ‘gift’ /daʔah/, mazdā Gs /mazdaʔah/, mā ‘month’ /maʔah/.

Ad. 3. (-ās-)
-ās- have the forms in -ā if they are followed by -cā or another clitic.
NAPf of ā-stems: daēnās-cā.
NAPn of s-stems: raocās-cā, nabās-cā
mażdās-cā
dās-tū
haurvās-cā, amora(ta)tās-cā etc. do not belong to this group as the Ns is haurvātās.

Non-final -ās- did not become -ās-: sāstī, sāstū, sāstār-, sāsnā-, vāsār-, yāsā- (pres. of yā), rāstit, nōnāsā (pl. of nas- ‘disappear’). (Nor did -āz-: sāzdūm, brāzdūm, urvāzā, wāsa-, vāziśa-) Nor did final -ās when -s was retained: we have haurvātās, where the -s was retained because it derives from *-tāls. (-s is further preserved in as ‘you were’, if this was *aʔas. But the interpretation is uncertain.) Therefore the forms in -ās-cā etc. must have -ā- analogically. (It cannot be due to the secondary accent caused by the enclitic.) This is confirmed by ākāśting against ākā. Here the form was not easily analysable. (It is not clear to us either what form it is.) The form proves that Gathic had /-āscal/. amora(ta)tās-cā is a clear instance of analogical -ās-: the nominative has (haurvā)taś and there is no way to explain -āscā but as due to -āscā of the other forms.

Ad 4. (hudābyō)
hudābyō is from *hu-daʔah-. We expect *hu-daʔazbyah. The -z- was replaced by -h- (probably already in PII; cf. raocābīs for *raucāzbiś). As Gathic had disyllabic /-aʔa/-, the -ā- is of later date.

Ad 5. (-ānt-)
-ānt- < -ānt- have (all forms):
išantī 3pl sub. of iš- urge, /išaʔantī/.
bairyanṭantī 3pl sub. pass., /baryaʔantail/.
dāntī 3pl. sub. M of dā-, /daʔantail/.
hacāntī 3pl. sub. M of hac-, /hacāʔantail/.
As all forms still had /-aʔa/- in Gathic, the group -ānt- does not concern us.

The 2 pl. ind. pres. of xšnā- ‘to know’, zānātā, for *zānōsā /zāntal/, is curious in having -ānt- and in showing a vowel between n and t, which is found nowhere else. The ā is introduced analogically (*gū-n-H-ta >
*zanta, cf. Skt. jānīṭa) 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 ānt. 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 ānt.

Ad 6. (xratā)
xratā 48.4d and poratā 51.13b are locatives. These forms probably represent /xratāu/ etc., cf. Skt. kratau. That -āu was preserved in Gathic is shown by vayhāu. Y 51.12a has poratā in the same function. This form may be due to the surrounding forms in -ā, or it has the locative ending in short -au.

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

13. a
The sign a is found:
1. before the spirants s, z, θ;
2. before ś, ẓ;
3. -am, -an < *-ām, *-ān;
4. -am-, -an- in a few words (other than 5.);
5. -amn-.

Ad 1.
Ns pte. -as: has (ah- ‘to be’), porasas (‘to ask’) etc.
-as-cā Ap of a-stems;
aśa- ‘part’;
ṇasāt red. aor. of nas- ‘attain’;
vās 3sg s-aor. of van- ‘overcome’ (< *vāns-).
ḍobzāh- ‘support’;
maṭra-, Skt. māṇtra-.

Ad 2.

Ad 3. (-am, -an)
Final *-ām, *-ān always became -am, -an.
-am Asf. of ā-stems;
THE PHONEMIC SYSTEM

-am Gp ending;
-mam NAp of man-stems;
-tam 2pl imp. M ending.

Some of these forms still had /-aram/ in Gathic:
-am Gp ending;

mazdam As /mazdaram/;
dyam 1sg opt. of dā-, /dyaaram/.

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

Ad 4. (-an-, -am-)

-an- > -an- is found only in the following forms:
bqnaym caus. /bânayam/;
dâmiš, -im 'creative, creator' (but dâmöst);
mqnrâiš < *mâmraïš?

rânayâ Gd (but rânôbyâ, -byô);
urvanam, -nô As, Np (but urvânê, YH urvânem).

On the other hand we have a dozen forms with -ām- and some twenty with -ān-: dzâmâspâ-, splâma-, dâman-; kâma-, nâman-, râman-, âghâma, juâmah, nâshâmâ, avâmi; apâna-, avaghâna-, domâna-, hudânâ, mabrânê, ustâna-, yanâ-. Therefore, in this case I conclude that the nasalization is a (late?) phonetic tendency and that Gathic had phonemic /ām, ân/.

Ad 5. (ann)

-anN- (and -ânN-?) became -anN-. Only in:
anman- 'spirit';
duânman- 'cloud' (L. dunman-);
xšanmanê

YH fryanmahî, hvanmahî.

As LAv. duânman- presupposes u < wo, i.e. *duânman-, q here represents a nasal s, [?] Phonemically it can be interpreted as /-anm-/.

Concluciton As all developments are fully conditioned, it is not necessary to assume nasalized phonemes. In the case of -sraś, we must posit /-rnâś/.

A nasalized ř as a separate phoneme is improbable because there are no other nasalized phonemes, and because ř is not a phoneme (it is an allophone of /r/). Decisive is that there is no opposition between ř and řn. (It requires that the sound law s > ř after r also operates with intervening nasal, but this is no difficulty.)
14. ə, ã
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 ōə < *au
5. in əw < *aw;
6. in an, am < *an, am
   a. -ən, -ēn
   b. ən-V, an-C
      mn-V, mən-C
   c. -ōngh-, -ōng
7. -ō < *-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 allophonic allophone and as this is typographically easier, we shall simply write /r/.

amərətətəl- /amratətəl-;
cikətəs /cikətəs;
∂rəta- /dəta-;
rəs /rəs;
ωrəd- /ωrd-.

After labial the first ə is sometimes written ō:
mərənda- /mrənda-; ðərəsə /ðərəʃə.

After a vowel, when r is vocalic because it stands after a laryngeal, only rə is written:
rəŋya- /raŋya-;
frərə- must be /frərə- (LA2. has frərə-);
uzirədəyə /uz irədəyəl < *HiHrədəyə;
ərəsə if /ə rəsəl 33.12a.

It is not clear why árəm /atrm/ is written thus, instead of *átərm. The t shows that the r was syllabic, or otherwise it would have become θ, as in gen. sg. áthə. In LAv. rə is found more often. This notation is also found after -v- in inlaut, which is written o: fraorə /fraorə (It seems that θorə became ərə, which gave a (post-Gathic) syllabification [frə-ət].)

It has been argued that t 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 átərm, and the notation rə sometimes found in LAv.
Secondly, the sequence \( r + \) laryngeal (\( rH \)) resulted in \( ar \). The difference \( sr : ar \) is rather one of vocalic \( r : \) vowel + \( r \) as in Old Persian and Sanskrit (\( r : \) ir, \( ûr \)) than one between two different vowels.

Anyhow, \( sra \) can be interpreted as \( lrI \), more easily than as \( s + r \).

On \( sra \) see §13.2.

On \( lrI > ar \) see IV 61a.

On \( rI > s \) see §8.

A (subphonemic) voiceless \( lrI \) is written with a preceding \( h \), \( shr: khrpom \); see §8.

\( srai \) is \([tz] \) followed by \( i \)-epenthesis.

Ad 2. \((-ra)\)

Every word final \( r \) is written \(-r\) (with \(-s \) written long, as are all final vowels, except \( antar \) (twice, \( antar\) once) and \( hanar\).

\( ayr\), \( r\)azer\, \( vadar\), 3 pl \( adar\), \( áyhar\) etc.

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

Ad 3. \((rC, CgC)\)

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

\( bar\)it\,\, \( dar\)aga- ‘long’, \( dar\)as- ‘see’, \( gar\)ema- ‘heat’.

The exceptions are:

\[
\begin{align*}
\text{ärmaiti-} & \quad \text{parśta- (and parśti-?)} \\
khrp- & \quad \text{höm. parśtis} \\
arśnavaitiś & \quad \text{duž. varśta-, hvarśta-} \\
darśtōiś & \quad \text{YH ālarś}
\end{align*}
\]

On \( khrp- \) see §8. \( ärmaiti- \) is unexplained; it must be read \( laramati-\). The other forms all have \( ar\) < \( *t\) (in the Gāthās proper only before \( t \) except \( arśnavaitiś \), but this form presents more problems). The non-writing of \( s \) 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 \( s \). 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 \( db \), \( gd \).

\( damāna-, hudoma-, raēxnah-, rafānah-, fōras-, sṛtaśa-, xṛūnāram, dōbaomā, cagasā, dugādar-\).

This \( s \) is found in:

clusters of two consonants:

between \( g \), \( d \) and \( d \), \( b \), \( j \);

before nasals, but not regularly (with and without \( s : xn \), \( xm \), \( òn \), \( òm \), \( fn \), \( ūn \), \( ūm \); only \( gn \), \( góm \), \( dám \), \( sám \), \( zám \); only \( sn \), \( nm \), \( mn \))
before r not frequently
  far, sor beside fr, sr
  nor
only gr, dr, xr, thr, zr, mr
on s, š, ž before x, j see 8a below.
a is not found (except in the cases mentioned) in:
  pt
  əβ
  sk, st, sp, sc, zd
  šk, št, žd
clusters of three consonants:
  skat (āskaitām), fsr (fsoratū-);
  foDr (foDrōī), xoDr (vaxadra-);
  not when the first or the second consonant is s or š: vāstra-, uštra-,
  humadra-, afšman-, dafšnaya-
  xšt, xšm, xšn
clusters of four consonants:
  only xrafstra-

Ad 4. (šu)
Every šu represents PIIE *au, which is also represented as ao. šu is found
only in the gen. sg. of u-stems: -šuš. See §20.

Ad 5. (ovi)
Every sequence avi became uvi:
  vūidvā, kavdās-, tavēš-
An i raises and palatalizes, but the u prevents the palatalization
(Morgenstierne).
If mraoi 32.14c represents /
  mraui/, it shows that avi had not yet changed
in Zarathustra's time.

Ad 6. (sn, sm)
6a. Final -am, -an everywhere appear as -ēm, ēn (on the length of the
  vowel see 21.4).
  As. of a-stems: -ēm;
  As. of cons.-stems: -ēm;
  1sg of athem. stems: āram lā aram/
  azēm 'I'; yuēm 'you'; ayēm 'this' etc.
  Neuter ptc. yaso.śyōn, rāpōn
6b. In inlaut am, an do not always appear as am, an. We find in the Gāthās
  proper:
THE PHONEMIC SYSTEM

<table>
<thead>
<tr>
<th>before V</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>-n</td>
<td>15 30 7 4</td>
</tr>
<tr>
<td>-nt</td>
<td>23 39 (yent incl.)</td>
</tr>
<tr>
<td>-m</td>
<td>13 3 12 9</td>
</tr>
</tbody>
</table>

(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 \(y\)m\(a\) 30.3a). The remaining forms are hama\(st\)\(a\)r\(o\) and kama\(n\)\(s\)va-\(, kama\(n\)\(a\)\(n\)ar\(-, where I suppose LAv. forms (hama-, kamma-).

-\(ant\)-. We find -an/- 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-: ant\(a\)r\(a\), ba\(d\)ant\(o\), d\(a\)nt\(o\), d\(a\)int\(i\), m\(a\)nt\(a\), m\(a\)nt\(u\), \(r\)ap\(a\)nt\(-.

-\(an\)-. Before consonant we have -an- four times. All have -a(\(i\)ny)-. (Note vor\(z\)\(a\)\(n\)\(y\)\(o\), which may have \(s\) from vor\(z\)\(a\)\(n\)a-\(, Note further that a following \(v\) does not have a: sp\(\tilde{\nu}\)val, k\(\tilde{\nu}\)val.)

\(m\)\(lan\) before vowel shows no distribution. \(m\)\(V\) does not occur after special sounds (\(3\) after \(m\), \(an\)\(V\) (which is twice as frequent) has a few centers (after \(m\) 9, \(v\) 4 (\(v\)\(m\) does not occur), initially 4 (\(\tilde{\eta}\)n- 2), \(p\) 3 (\(p\m\) 1)).

We conclude that \(m\), \(m\)\(n\) is regular word-finally; that in inlaut before consonant \(m\), \(m\)\(n\) are nearly regular; that before vowel \(m\)\(n\) is almost regular, but that \(an\) is more frequent than \(m\). 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 \(y\)\(a\), \(c\)\(a\), \(j\)\(a\) would be pronounced with [\(i\)], \(u\) with [\(u\)], the vowel a had to be written to designate a pronunciation a.

6c. -\(angh\)-, \(\tilde{\eta}ng\) continue *-\(anh\)(-). For the forms see §10. Before ng(h) we find always a for a, with the following exceptions:

- a. angra-, dangra-;
- b. cyanghat Y 44.12e.

Ad a. We saw that these forms stand for *agra-, lahra- etc. This explains why they do not have a.

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 -\(ant\)-, §6b.

Ad 7. (-\(\tilde{\eta}\) < *-\(ah\))

Normally *-\(ah\) appears as -\(\tilde{\eta}\). We find -\(\tilde{\eta}\) < *-\(ah\):

1. in the Nsm of pronouns \(k\)\(a\), \(j\)\(a\); poss. \(m\)\(\tilde{\eta}\), \(\theta\)\(\beta\)\(\tilde{\eta}\), k\(\tilde{\nu}\); encl. n\(\tilde{\eta}\), w\(\tilde{\eta}\). These forms never have \(\tilde{\eta}\) in Gathic, which is normal in LAv.
2. in the adverbs *adō, parō, tarō, vasō*;
3. in the Ns of *a*-stems *ciōrō, kābō*;
4. in the Ns of *s*-stems *hazō, nomō, vacō*;
5. in the Gs *mazō, sarō*.

Some of these forms also have -ō in Gathic:

<table>
<thead>
<tr>
<th></th>
<th>GAv. -ō</th>
<th>GAv. -ō</th>
<th>LAv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. pron.</td>
<td>kō etc.</td>
<td>-</td>
<td>kō etc.</td>
</tr>
<tr>
<td>2. adv.</td>
<td>adō 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>parō 2</td>
<td>-</td>
<td>parō</td>
</tr>
<tr>
<td></td>
<td>tarō 1</td>
<td>-</td>
<td>tarō, tarō</td>
</tr>
<tr>
<td></td>
<td>vasō 2</td>
<td>vasō 2</td>
<td>vasō</td>
</tr>
<tr>
<td>3. nouns</td>
<td>ciōrō 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>kābō</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4.</td>
<td>hazō 1</td>
<td>hazō 1</td>
<td>hazō</td>
</tr>
<tr>
<td></td>
<td>nomō 1</td>
<td>-</td>
<td>nomō</td>
</tr>
<tr>
<td></td>
<td>vacō 1</td>
<td>vacō 2</td>
<td>vacō</td>
</tr>
<tr>
<td>5. gen.</td>
<td>mazō 1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>sarō 1</td>
<td>sarō 1 (Gs/Np)</td>
<td>sarō</td>
</tr>
</tbody>
</table>

It is clear that the -ō is typical of Gathic, -ō of late Avestan. Probably we must assume that -ō 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 *vasō xšaya-* (cf. *vasasv.xšatra-* ) was likewise preserved. (LA v. had *mazant-* in the oblique cases for GAv. *maz-* .)

8. (special cases)

a. *paiteš* etc.

b. *uōstā*

c. *ō* < *aa*

d. YH *hōbavaintīš*

e. *covīštā*

f. YH *vāloymahī*

g. at *ō vaocat*

h. *ōō*

Ad a. (*paiteš*)

In a few cases -ō functions as a glide between two words, mostly after and/or before a sibilant: *paiteš saāyāt 44.9c, huzōntuš spošīō 43.3c, yōnza spašūdā 53.6b, azō sarvdanā 43.14d*, and in a compound *vasasv.xšatra-* . (Note that this -o 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. yēngstū (from yēnγ and yas-).

Ad 8c. (ā < aa)

ā continues ā in āyōm, strōm-ā, but both have disyllabic aāa according to the metre, so ā is irrelevant for Gāthic. How ā originated in these forms is unexplained.

Ad 8d. (YH hābavaintīṣ)

YH hābavaintīṣ 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. (covištā)

covištā 2pl root aor., covištā pass. aor. must have had /caิ-/. We expect coisible (or *caisible-). The form must have been transformed artificially. As LAv.

Ad 8f. (YH vālōyāmahī)

YH vālōyāmahī has ə from a. In Gāthic this was still a, as -ay- is mostly preserved (cf. §18 on əy). YH vālōyōtū presupposes *vālōyōtū with ə > ə through influence of the following ə; see 18.6 and 7.

Ad 8g. (at ə vaocat)

29.6a has at ə vaocat. There have been three interpretations. 1. lavaucatl is improbable, as augment is rare and as it is not clear why a- would have become ə. 2. Read at, ə as-latlahl 'thereupon', Skt. ātatas. The -ə then belongs to section 7 above. But Avestan has no such forms in -ah. 3. ə is lahl, nom. sg. of the pronoun a-. Uncertain.

Ad 8h. (əə)

əə is found initially in əənū, əəvā, əəghā, where it has no phonological value (cf. āghō). YH əədū has been interpreted as (tal)ə ālū. Probably -ə was the end of a preceding word, the second ə a kind of offglide to the next word beginning with a vowel. In bōdūs its value is unknown (but it can hardly have been anything else but a or ə).

Ad 8i. (hōcā)

hōcā 46.1c is not explained. See X 16.

Ad 8j. (xšōm)

Not clear either is xšōm/xšūnum 48.12b, 53.2b.
Ad 8k. (əh/ah)
In some forms we find əh < ah: əhmā ‘us’, grāhma-. In some forms the h seems lost: tarōmātīrī ‘opposition’, manō.vistārī (doubtful), raocōvī, YH vacōvī. In other forms ah is retained: ahmāt, ahmāka-, kahmāt etc., dahma-, vahma-, vahyāh-. Cf. -ah > ə. As LAv. has -ah-, ah was probably introduced from there.

Ad 8l. (zamō)
ə for i is probably found in zamō 51.12a, if this is the gen. sg. of ‘winter’, izimahl. (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. (drsgvant-)
Drsgvant- has ə for u. It could be a development parallel to that of 8n, with u > xu > ə. LAv. has drovā/druvāl < *druva, which suggests that u was still present there, but it is possible that xu > xu became uv. ə for u has also been supposed for YH bavvant-, but the form has no etymology (it has been connected with Skt. bahu-). It is supposed that u was dissimilated before v, but this is phonetically not very probable. Also in huruš 51.10b there is no dissimilation. In YH suRunvant əv was even coloured to uru. I think the form is not a linguistic reality. Cf. the preceding section.

Ad 8n. (hušitiš)
i instead of i before j, y is found:
Šnitiš Šanitiš;
Hušitiš, -iš against Hušitoš.
I have no explanation for this phenomenon. It is clearly subphonemic. It could be that the i is epenthetic, and that (an)i(ti-) was dissimilated into ə.

Whether ušurū shows the same phenomenon is uncertain. Another case form is ušuryē. The forms are unidentified. I they stand for lušru-/, 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 əh). l is no problem.
Remain m. and n. Of the development in m. drsgvant- is the only certain instance in all Avestan. That in n. (i > ə before i) has a few instances in LAv. too (Hōndu-; and some forms in -s-omna- for -śimna- for -syomna-).
All three phenomena are of a type, the colouring of vowels, which is
typical LAv., but which is mostly absent from Gactic. Also for LAv.
these forms (and a few more instances of i > a before i) are the only
reason for Morgenstierne to consider a a phoneme. So they must be later
intrusions.

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

uxšyeti, srāvahyeti
ādiyeyeti
mainyetē, zbayenti
štuyentē
aṣā. yecc < *aṣāya-ca Ds

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

Following ae (and āi) does not cause this change: ęduyantaē-ca.
daibibyanē ptc. also does not show ye (perhaps restored after the other
case forms).

Intervening v seems to prevent the development: jāvē.

θbāi.āhī 34.11c continues *θayahi. 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 brāvyodyāi o must replace a (not e). This proves that there was no
development ya > ye until the time when this form got ō (which was cer-
tainly after Zarathustra).

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

Final -ya appears as -ē ( < -ye) in Zaraḫuṣṭrahē 53.1a.3b, which is an
intrusion from LAv.; Gathic has -ahyā. YH vahēhiš < *vahyahēhī 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 āi, aē, -ē.

Ad 3. Final -yā appears as -ye in paouryē 44.19d Nsf < *parviyā. Nor-
mal is -yā: vaintyā, vāstryā, vahhuyā, xšayā, anyā, aŋhayā, so it will be a late
intrusion.
The sign \( o \) is found:
1. in \( ao \); see §20 on \( ūu, ao, -o; \)
2. after labial before a syllable with \( u \).

Ad 2.
In this position it stands for \( a \). Often combined with epenthesis.
mošu- 'soon', Skt. makṣu.
pouruś 'many' Apm, cf. Gs paraoš.
voḥū, Gs vadhūruś.
vourucāśaṇē 'far seeing'.

In \( pauourvām \) 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. taur-
vayūmā. In \( pauvaratām \) it is not found at all, nor in \( spōnvau, bándvō, \) where
\( an > en \) 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 phoëneme \( o \).) The forms cited are
the only instances, and there are more forms with \( a \) retained: \( pasuś, spaśhū,\)
\( manu, mainyu-, vafuś, vadu-badubhō, vīvaḥhūśō \) (YH \( pasuka-, vadhudā) \). It is clear that it was a later tendency introduced in a few cases.

18. \( ā \)
\( ā \) occurs:
1. \( -ā < -ah; \)
2. \( -ā < -a; \)
3. \( -ā \) for \( -a \) in words that were split up;
4. \( -ā < -au; \) see §20 on \( ūu, ao, -o; \)
5. in \( ōi, \) see §19 on \( ōi, aē, -ē; \)
6. in \( -āyā < -ayā; \)
7. in a number of forms replacing \( s, a \) or \( ā; \)
8. for \( ā \) before \( u \) in the following syllable (\( jyōlūm \)).

Ad 1. \((-o < -ah)\)
\( *-us > *-ah > -o. \)

Nsm of \( a\)-stems \( dvaśō, rəmō \)
NAsn of \( s\)-stems \( draonō, manō; \)
Gs of cons.-stems: \( drūjō; \)
Np of cons.-stems: \( narō. \)

We also find \( -r \) in this position with the same origin. \( -r \) is typical of
Gathic. There are two possibilities:
1. \( -r \) was Gathic and \( -o \) 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 -ē which later became -ō. (The development to -ō was post-Gathic; see on -ō < *-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 frāvacā 34.12b, 46.7e, but YH fravacāmā 35.9), as it is in normal compounds (frā- only in frāxnuna-), with one exception in each case: frōyāś 46.8b for /fra ayāl/ ( > *frāyāl?) and frōrtōiś < *fraʔtī- (see below). The forms may be given:

<table>
<thead>
<tr>
<th>Form</th>
<th>Gathic Position</th>
<th>Ref.</th>
</tr>
</thead>
<tbody>
<tr>
<td>frō mā</td>
<td>28.11</td>
<td>[avō] bavaitā 30.10</td>
</tr>
<tr>
<td>frō mā</td>
<td>45.6</td>
<td>avā drujō 30.10</td>
</tr>
<tr>
<td>frō māa</td>
<td>33.8</td>
<td>avā yūi 44.13</td>
</tr>
<tr>
<td>frō vā</td>
<td>49.6</td>
<td></td>
</tr>
<tr>
<td>frō x'āēlōvē</td>
<td>46.5d</td>
<td></td>
</tr>
<tr>
<td>frō spmīla</td>
<td>33.13c</td>
<td></td>
</tr>
<tr>
<td>frō ašahyā</td>
<td>46.3b</td>
<td></td>
</tr>
<tr>
<td>frō laiś</td>
<td>46.10e</td>
<td></td>
</tr>
<tr>
<td>(frōyāś 46.8b)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

frōrtōiś is unexplained. Perhaps LAv. frōrti- points to an earlier stage *frō-rra- (with frō later replacing frā), though from *fraʔrti- I would expect *frārti-, cf. rāraṣa-.

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 zuštā-
baxšō, hvā
daragō, jyāltim
didragyō, duyē /didragžaduvel/, 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 ē is not relevant to Gathic.
Ad 4. see §20.
Ad 5. see §20.
Ad 6. (ōyā < ayā)
A number of forms has ōyā:

<table>
<thead>
<tr>
<th>Form</th>
<th>ōyā</th>
</tr>
</thead>
<tbody>
<tr>
<td>akōyā</td>
<td>ōyā</td>
</tr>
<tr>
<td>hādōyā</td>
<td>urudōyatal /rudayatal</td>
</tr>
<tr>
<td>isōyā</td>
<td>vōyabrā /uyabrā or /uabrā?</td>
</tr>
<tr>
<td>jōyā (jūiyā)</td>
<td>x̂aōbrā /huʔābrayā/ ins. sg. (or.</td>
</tr>
<tr>
<td>a. mōyastrā. baranā</td>
<td>/huʔābrai ̣ā/ loc. sg.?</td>
</tr>
</tbody>
</table>

YH vātōyōtū 35.6 beside vātōyāmahī 35.7

<table>
<thead>
<tr>
<th>Form</th>
<th>ōyā</th>
</tr>
</thead>
<tbody>
<tr>
<td>axtōyōi</td>
<td>Ds of axti-</td>
</tr>
<tr>
<td>ubōyō loc. du. of uha- ‘both’</td>
<td></td>
</tr>
<tr>
<td>jōyā continues PII *jūiya-, and the form was still trisyllabic. LAv. juya- and (with false vocalization) juya- probably point to *jūiya-, written jūita-, with later u̯i &gt; u̯i &gt; u̯ &gt; ōi. As -iv- was preserved (ašivā, fraidivā), there is no reason why Gothic would not have had /jūiya-/, and in fact this form has been preserved in gam jūyam Y 3.3, 22.1. But the form is also interpreted differently.</td>
<td></td>
</tr>
<tr>
<td>isōyā /is-ay-al</td>
<td>is 1sg opt. of a thematic present.</td>
</tr>
<tr>
<td>If x̂aōbrōyā was a loc. (and ā a separate word), -ōi was regular.</td>
<td></td>
</tr>
<tr>
<td>urudōyatal points to a present /rudaya-/.</td>
<td></td>
</tr>
<tr>
<td>ōyā may be /ayāl, ins. sg. of aveym.</td>
<td></td>
</tr>
</tbody>
</table>

The other Gatha-forms are unknown.

YH vātōyōtū has ōy apparently from ōy, cf. vātōyāmahī (see Ad 7. below).

As -ay- is normally preserved in Gothic, -ōy- in these forms must be of later date. It has been explained as taken over from forms with anteconsonantal a̯ı > ōi, e.g. 1sg opt -ōyu after -ōi̯; ōi; ubōyō after ubōi̯byā. But this explanation seems not possible for all instances.

Ad 7. (ō for ō, a̯ ă a)
The forms are the following:

for ō: ñbōrōšā (for or̯t);

<table>
<thead>
<tr>
<th>Form</th>
<th>ōyā</th>
</tr>
</thead>
<tbody>
<tr>
<td>mōrāndat &lt; *mōranda-</td>
<td></td>
</tr>
<tr>
<td>garōbīš &lt; *garōbīš &lt; *garbiš;</td>
<td></td>
</tr>
<tr>
<td>dużazobd &lt; *-zobā &lt; *-zbā (Gathic /zuʔāhl/);</td>
<td></td>
</tr>
<tr>
<td>ñb≃rōzdūm &lt; *ñb≃rōzdum</td>
<td></td>
</tr>
<tr>
<td>aajōnghvant-</td>
<td>&lt; *aajōnghvant-</td>
</tr>
</tbody>
</table>
cazđônghvant-
YH raocđônghvant-
YH vālōyōtū < *vālōyōtū;
for a: cōrāt < *cart
frōrōtīš (LAv. frōrī-) < *fra?ti-
syōdūm < *syadum
brāyōidyāi < *brāyadyāi
YH vurōyōtū
YH vālōyōtū;
YH huxsābrōtma-.
for ā: dōrist beside ārist
jyōtūm, Gs jyātiš
frōsyāl < *fra asyāt
for a or ā: uzōmōhi < *uz-mahi or *uz-mā-hi
ā > ō is quite difficult; there is no general rule. In frōrōtīš the preposition in the form frō will have been introduced, as well as in frōsyāl (and frō here is artificial, see 2 above). brāyōidyāi is abnormal in that it does not have -yeidyāi. It is probably due to a split, cf. brāyō,dyāi J2. -dūm is often split off, so that syō- could have the same origin. This is certainly the explanation for huxsābrōtma- (a v.l. has -ō.tma-; cf. also YH spontō.tma-).
In the forms -ōtu 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 š, 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, páyūm, āyu, 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 -ɨ is very frequent, but -ōi is also well represented (some 40 forms).

The comparison aʊ : ōu : ɨ

aɛ : ōi : ɨ

suggests that ōi continues ɨ. When we accept this, both elements of ōi/ōi are more closed than those of aɛ. Compare the figure (Morgenstierne 1947, 47):

\[ \text{\begin{tabular}{c|c|c}
\text{} & \text{o} & \text{u} \\
\hline
\text{e} & \text{a} & \text{i} \\
\end{tabular}} \]

Therefore it seems useful to look whether there is a distinction between open and closed syllables. We find in the Gatha's proper (final -ōi, -ɨ not considered):

<table>
<thead>
<tr>
<th></th>
<th>ōi</th>
<th>aɛ</th>
</tr>
</thead>
<tbody>
<tr>
<td>closed</td>
<td>23</td>
<td>10</td>
</tr>
<tr>
<td>open</td>
<td>7</td>
<td>48</td>
</tr>
<tr>
<td>total</td>
<td>29</td>
<td>58</td>
</tr>
</tbody>
</table>

(Given are different words, not occurrences. Not counted are the genitivs in -ōi. 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 aɛ have -aɛɨyō. We may conclude that open : closed was the original distribution.

The exceptions are the following ōi in open syllable:

<table>
<thead>
<tr>
<th>ōi in open syllable:</th>
<th>mōiðat</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. hoíðōi</td>
<td></td>
</tr>
<tr>
<td>cıkōtərsē</td>
<td>wōividē, -aitē</td>
</tr>
<tr>
<td>cōištōm</td>
<td>vāuōimaidē</td>
</tr>
<tr>
<td>cōiðat, -aitē</td>
<td></td>
</tr>
<tr>
<td>dōišt, dōištō</td>
<td></td>
</tr>
</tbody>
</table>

All forms but one are verb forms. I suppose that ōi is due to other forms where ōi was regular. Cf. mōišt beside mōiðat; cf. cōišt, cōišt beside cōištōm. Apparently ōi was generalized. The roots cɨt-, cɨt- and cɨt- have always ōi in the full grade in Gathic. (We have seen that cōišt- also presupposes *cōišt-; 14.8e of this chapter.) As to wōividē, the form wōi.vidaišē was split. For vāuōimaidē too there is some evidence for split. a. hoíðōi may be assimilated to final -ōi.
ae in closed syllable have:

-ae³ma-
- hamaéstārō
- raēxnaḥ-
- -aēibyō 7 x

There are six forms with -ōibyō/ā. ae 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):

<table>
<thead>
<tr>
<th>ae</th>
<th>oē</th>
</tr>
</thead>
<tbody>
<tr>
<td>in closed syll. 4</td>
<td>6</td>
</tr>
<tr>
<td>in open syll. 1</td>
<td>16</td>
</tr>
</tbody>
</table>

The exceptions are:

ōi in open syllable in vaocōimā opt. Cf. on vāurōimaidī above.
ae in closed syllable in:

-aeibyō twice
- sraēšla-
- naēnaēstārō (fraēsqyāmahē)

On -aēibyō see above (the YH has -ōibyō/ā four times).
The forms with yavae- were root nouns with -su(v)ō, -ji(j)ō.

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

nōi : naēdā, naēcīs
daēdōiši
vaēdā, vōistā, vaēdā 1, 2 and 3 sg. of vid- 'to know'
vaēdō. dúm : vōizdūm

-ōiš gen. sg. of the i-stems, where **-aēiš is never found;
-aeśū loc. pl. : -ōibyō dat. pl. Whereas -aēbyō is frequent, **-ōiśū is never found.
(-e and) -aēcā, never **-ōicā;
the thematic optative.
The thematic optative has the following forms (in brackets forms not relevant):

opt. Act. -

-ōiš GL
-ōi L
-ae³mā GL, -ōimā YH
-aeša L
-aeša L
-aeša GL
-ōimaidī G, ōimaidē L
-ōimaidī G, ōimaidē L
-ōidbem L
(-ayā)
(-ayanta)
All forms agree to the rule except 1 pl. Med., in Gathic as well as in LA. For GA. værō̄maidī we saw that it may have been split (where -ōi is regular). Another exception is YH vaacōimā, 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 naēm ‘we’ and gaēm, acc. sg. of guyā- ‘life’, still were disyllabic /väyam/ and /geyam/ in Gathic. LA. seems to prefer ae.

Apparently final -ai was pronounced as a closed diphthong for we never find -ae. -ē is frequent, notably in the dat. sg. ending of consonant-stems, and in 3sg and 3pl -lē, -nē (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, gəə. lōi : gəə.lē. (The forms in -ē are found at the end of the line. Note that the forms in -ō < -ah, beside such in -ō (§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 -ōi or -ai.

Thō. ai 34.11c, which must have been /θväyahil/, 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 ae were allophones we must posit one diphthong, for which we posit /ai/.

Note that the forms in -uye must have had -ai, i.e. -u(ə)ai (the y was a glide before the -ē), and the metre shows that -uye was monosyllabic. Thus vaidye was /vaidvail/.

Appendix ae/ōi in Avestan

A. Non-final syllables

When stems are counted once only (e.g. aēnahvant- is neglected because we have aēnakh-. 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):

<table>
<thead>
<tr>
<th></th>
<th>ōi</th>
<th>ae</th>
</tr>
</thead>
<tbody>
<tr>
<td>in closed syllable</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>in open syllable</td>
<td>6</td>
<td>162</td>
</tr>
</tbody>
</table>
Of the six forms with -öi in open syllable three are öiva-, vidöiva-, haröiva-
häröiva-. It appears, however, that these words have -öyum in the acc. sg. (supposed to be from -öiva-) and -aöva- in the other forms. It is evident that -öyum does not derive from **-öivom from an ununderstandable stem form -öiva-, but that the ö(y) is due to -um < -um. Thus we must assume *-aivam > *-aivom > *-aum, *-ayum > -öyum. These forms, then, do not have öi < ai in open syllable. rachoismoom ‘beim Dahineilen im Wagen’ may contain the loc. rahoï. I have no explanation for söidiś (Y 58.1) and a.höiboi (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, öi the variant in closed syllable.

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

(boorīmya-)saēla- : aibī.xrōībn- (see also s.v. *aibī.šaēlan-), šoibra-;
anupāēla- : anupōibhā-
armaēśad- : armōī<ē>do. The conjecture has been rejected (because a zero grade of -śad- is unknown) and replaced by *armōištō (cf. rahoīštē).
daēman- : dōibra-;
xrōēla- : xrōibnī-
yētustoma- : ĭōibhā (nom. sg. perf. ptc. of yat-);
vāyra- : vōīrya-;
zaēsa- : zōīdištēa-, zōīshn..-

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

rābāēśtā- : rahoīštē; cf. gōbēōśtā-;
hamaēstar- : hamōīstri;
rābēba- : rōībshn.

Irregular beside regular aē have:
gaēēbya- : gaēba-
daēvya- : daēvna-
vaēēbya- : vēīb.vāēpa-
maēśma- : gōo-maēśa-
haēn[ya- : haēna-
vindvēstva- : duāēśah-
raēxnah- : raēkah-. 

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

aēm and vaēm (which have not been counted) continue -ayom. It is possi-
ble that the diphthong here dated from a time when æ and ò were no longer automatic. This also explains acc. sg. kavaëm < *-ayam, and forms like 3 pl. cikaën < *-ayan.

B. Final syllables

Note the forms with final syllable closed with a consonant: cōiṭ, parōiṭ, bōiṭ, frōiṭ, nōiṭ, mōiṭ, yeōiṭ. -æC is never found.

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

As to the date of the phenomenon, we have seen that there is reason to suppose that it was post-Gathic. As the distribution æ: òi 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 aο : ūu, where ūu is very rare. It is only found in -ūus. Beside the Gothic forms I only found dūuś.sravah- and dūuś.manahya-. These are derivatives with full grade of duš- (Skt. dorgahā-).

They could have old ūu, retained because they looked like the gen. sg. ending (but perhaps ūu was introduced by scholars after the word was split up).

20. ūu, aο, -ō

1. ūu, aο
The distribution of ūu and aο is quite different from that of òi and æ. There are approximately 65 forms with aο, ūu is found only in the gen. sg. of u-stems (and one other form). There are seven of them, beside five in -aọś. It has been shown that -ūu is the Gothic form (Narten 1969). ūu, then, occurs in a gen. ending, just like òi in -òiś, i.e. in a closed syllable. We may assume that originally the distribution was the same as that of ði/ae, but for some reason ūu was ousted by aο. Perhaps the distribution existed only in final syllables. Here again we have one diphthong /au/. The one other form is /gauśa-/ (L. gaośa-) ‘ear’, which is written gōuś.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 aο, because it stood in an open syllable. Nevertheless it could be identified with the gen. sg. gōuś. 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 aο. 11 of them do not continue an old diphthong; see below. Five are gen. sg. in -aọś. Of the remaining 49 some 9 or 13 have aο in a closed syllable. The forms with aο 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.

*- ao* is written -aovē in drīgāovē, vayhāovē, xu aēaovē. This is a phonetic writing of the pronunciation of bilabial v in */-avail/.

mraot probably represents /mravē/.

/av/ before r is sometimes written ao: vaorāzaθā, < *-va-orāθ-, fraorē /frarē/.

karşanōn was /krarvan/, with later development -avan > -avon > -aun. ašaoršāryata was /arxiuxē-/ fraaršaʊstra- /fraaršaʊstra-/.

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

aγζαonvamnom has o instead of u indicating epenthesis.

2. -ō < -au

Only in porstō 51.12a, loc. sg. of porstu-. However, 51.13b the same form has porstā (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 *ha > *hō, *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:

<table>
<thead>
<tr>
<th>text</th>
<th>u</th>
<th>ū</th>
</tr>
</thead>
<tbody>
<tr>
<td>PII *u</td>
<td>58</td>
<td>19</td>
</tr>
<tr>
<td>PII *ū</td>
<td>5</td>
<td>18</td>
</tr>
</tbody>
</table>

(The numbers are not exact; there are several doubtful cases.)

The five words with u for old *ū are:

hizubīš

tanuši-cā

hunuš

hunara-, hunarstāt-

?urunas-cā, YH urunō
For urvan- there is no certain etymology. If it was *ruHan-/ruHn-, we expect long ũ, not if it was *Hrvan-. With hunara cf. Skt.ṣūnāra-; hu- can be analogical.

For -u-biñ, -u-śi- (if this stands for *-ušu-) cf. -i borçā for -i-. The -u- could be analogical.

With long ũ for short we have:

-ūm acc. sg.
-ūṛ acc. pl.
āzungi-
bug-um
būna-
drjā, -as-cā (-drujām)
dūraśa-
gūša- (: guṣ-t-)
?gūza-
urūdīyatā
urūraost
urūpayeniū

srūdyāi, asrū(z)dūm, srūlā
stūt-
sūca-
ūcām (vac-)
?ūtī
xṁūl-um
yūjān (: yuxtā)
yūṃmākā, -vant-
YH aiddīnām
āhūrīyā
išūûyāmāhī

An ũ was often lengthened, but precise rules cannot be established.
The acc. pl. -ūṛ continues *-uns, which will be a regular development.
The acc. sg. -ūm probably has ũ lengthened before tautosyllabic nasal.

It seems that an ũ with an epenthetic i was lengthened: āzungi- (from there in āzungi?), srūdyāi (from there in the other forms?), ūtī (if the ũ was etymologically short), YH āhūrīyā (cf. akura, ahurānī) and išūûdyā- (cf. išūd-um, -ō). There are no forms with epenthetic i and short ũ. The origin may be that the ũ was relatively longer than the etymicent i, and therefore written long to indicate the contrast, but it might as well be that the ũ thus really became identical with the long ũ.

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

Further it seems that in a closed syllable the lengthening was sometimes absent: gūša- : guṣtā, yūjān : yuxtā.

Remarkable is drujām : drujā, -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 ũ, ũ, only the numbers are larger.

There are eight words with i for expected ī:

kainibyo YH mainimadi-cā opt.
śyeśtibyo YH varizimā-cā
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 -i. A Gathic
lengthened -i 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 i for short is very frequent (the YH adds no new items):

?asīṭiś 44.9d
toviśi ( : toviś-cā)
ī
tivingha- (van-)
āvīśya-
ūr
vīcīra-
cīt
vīcīlā-
dīdaiṅhe
vī-
dīdarśaṭā
vī-
dīdarṣo
vī-
dālust
vī-
dīdrāya-
viṃvān-
dudvā ( : avisti-)
viṃvāca-
hiṃsaṭ
vīväcāra-
iśti- ( : ištōś)
vīśa
kṣvīna- , kṣvīlā-
vī-
jigorōz
vīśpa-
frā-mīmanā
vīśṭāpa-
mīḍaṃvant-, YH mīḍom
vīvaghuśa-
mīzōn?
svitii-ca ( *huiti-)
narṣṭī
svitiiya-
niś
rajiś
sīrā (sāh-)
svitīya-
and vista. Of these sostiha- has the normal superlative suffix -ista-, but in sostiha- this suffix was lengthened. In tovis-cā we have the shortening we saw above (asī-cā, xvi-cā). Therefore we may assume that lengthening after v was regular, but that it was changed by editors in the case of sostiha- and tovis-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 -ī(-), -ī- is striking, but there are exceptions: beside the superlative -isti-, ādiśti-, āvis, daibiś-, hiśay-, niśasya-, piśya-, naiśhīś- and the nom. sg. in -iś. āviś is all the more strange as after v we expect long ī.

There seems to be no short *-it (thus we have it, cī, dojī, arata-).

Remarkable is īsti- (three cases, 7 forms) against īstōiś (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
ah- anharā-cā
ayhā
aīdīś-cī (ādīś)
āshavan-
?caratas-cā
?dātram (Skt. dātrām?)
dā- dadyāi
fradaṭāi ā
i- ayantam lā yantam/
kayā
mavaite
mazā rayā
nanā (Skt. nānā)
?savvārō (sāvvānī)
tayā
yavat, yavat ā
-anam

abyas-cā, aīdīś-cī (root āṭh-), ?caratas-cā, anharā-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 -āl-.) It should be noted that many forms with -cā retained long ā in that position: gātām-cā, ajāitīm-cā, rāmām-cā, dāthm-cā. anharā-cā 45.7b stands beside āgharā. If ayhā 32.16c corresponds to Skt āsaya, we have the same shortening.
daduye was /daːdyavai/. It shows that the (contracted) ā was shortened after Zarathustra (this was either a linguistic fact or a graphical one).

dadyāi 31.5b, 51.20a must be a root infinitive, i.e. dā-dyāi. dādyāi 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.

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

mavailē (twice), Skt. māvant- stands against ṭhāvās (5 x), xṃāvātō, -valṃ, -vasū, yuśmāvat&m. It must be a simple error. The words are not found in LAv.

The second element of mazārayā contains rāy- ‘wealth’.

saxvārī contains the root sās-. A form sas- is found in the aorist of sīnghi-, but it will belong together with sāxvānī.

tayā adj. ‘secret’, Skt. tāyū-, LAv. has tāyu, tāya-, so it is probably an error.

yavat(.ā) cf. Skt. yāvat.

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

Five forms have a- for (the independent adverb) ā. (ajān is uncertain.) In [a]naśē 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 -amahi, -amaidē.

Of four words all forms found may be given:

| spitāmō 2 | haurvūtās, vās- 1, 1 |
| amā 1 | |
| domānām 1 | ānām 2 | uștanām 2 |
| domanahyā 1 | āmahyā 1 | valātō, valō 2, 1 |
| domānāi 1 | amāi 1 | ānāi 1 |
| | ānā 1 | vālā 6 |
| domānē 7 | amāghō 1 voc. | |

No general rule has been found. For the vocatives spitamā, -āghō 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, domanahyā could be explained, but spitamahyā contradicts it. Therefore such a solution is not probable for /fradābāyā/ (see above), nor for spitamāt 51.11a (which might have been *spitamāya; -āī itself was not disyllabic-in Gothic).
Even less clear is uṣṭanəm. Haurvalō may have -vat- after the nouns in -vant-.

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

2. Long ā for expected short is found:

<table>
<thead>
<tr>
<th>Word Form</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>ah- āḥāmā</td>
<td>nas- nāśāmā 2x</td>
</tr>
<tr>
<td>hātam, hātitum</td>
<td>rānyō, skōritūn</td>
</tr>
<tr>
<td>anyādā (Skt. anyātra)</td>
<td>rāmōm : rōmō, -om</td>
</tr>
<tr>
<td>ci- ṣyātā 3pl</td>
<td>sar-, pres. sāra-</td>
</tr>
<tr>
<td>?daibitānā</td>
<td>ṣrāvahyēti</td>
</tr>
<tr>
<td>dar- dādrē</td>
<td>urvāthā : urvāthō</td>
</tr>
<tr>
<td>dā- dātā 3pl</td>
<td>urvāthā- : urvātom</td>
</tr>
<tr>
<td>dā-3 dyālam</td>
<td>urvālōś</td>
</tr>
<tr>
<td>drguālā</td>
<td>vaŋ- vāunuŋ</td>
</tr>
<tr>
<td>duṭrāntā</td>
<td>urvāpal</td>
</tr>
<tr>
<td>ēōānī</td>
<td>var- vāura- /vavra-/</td>
</tr>
<tr>
<td>ēōānā</td>
<td>vāra-</td>
</tr>
<tr>
<td>frāxānəm : fraxēni</td>
<td>?vāstra- etc.</td>
</tr>
<tr>
<td>?fṛyānhaḥī</td>
<td>urvēṣyālam</td>
</tr>
<tr>
<td>hačcat, aspānā</td>
<td>vādāyoī</td>
</tr>
<tr>
<td>haibyauarasām</td>
<td>vāvorōī</td>
</tr>
<tr>
<td>hāmō : hamōm</td>
<td>?vourucaśānē</td>
</tr>
<tr>
<td>i- āyat</td>
<td>xvārammō</td>
</tr>
<tr>
<td>kilārm 2x</td>
<td>xvāpāibhyāl</td>
</tr>
<tr>
<td>kāvaya-</td>
<td>xvōnvaśalā</td>
</tr>
<tr>
<td>man- mainyātā 3pl</td>
<td></td>
</tr>
<tr>
<td>mśrvādātā 3pl</td>
<td></td>
</tr>
</tbody>
</table>

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

It has been observed that lengthening is frequently found before a long ā: āḥāmā, nāśāmā (also nāśē), vṛṣyālam, dālam, the 3pl forms in -ātā, anyādā, ?daibitānā, hačcat, aspānā, urvāthā (once: urvāthō 6x), xvōnvaśalā. Here may also belong hātam (but also hātitum). 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:

urvatōm 1
vāṭahyā 1
dragvatō 4
vāṭē 7, -vatae- 1
vāṭā 2
vāṭā 1
Cf. urvātīś, L. urvaitiśca, urvaiti, urvāitya. Skt. urvā- shows that -a- is original. Here the -ā- spread to the genitive. Note that this lengthening is not regular (e.g. drgvalām), and that elsewhere a long ā was shortened before long a (gen. pl. ā-stems -anām, nanā, layā).

For kātārm an analogical process has been assumed: as long ā in the penultimate was shortened when a clitic was added, (L.) kātārām-ciṭ produced an irregular kātārm. This explanation cannot be applied to kāvayas-. Perhaps the first vowel of a sequence of three shorts was lengthened, cf. frāxñānām, srāvahyeṭṭi.

āyat layatl 31.20a will be due to ēyat ē layatl 46.6a.

dvāra-, sāra-, xvāra- must have had originally short a, as roots in -īr are impossible in PIE.

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

With xvāpaityat compare ṭhā-, ṛhmā-, xṭmā- (yā-ṛyāthana-).

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

4. ā, ē

As to the length of ā, clear tendencies can be seen. As ā 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 ā is short: rvC, CrC, srə = [t].

As to srə, if this were a full vowel phoneme + r + svarabhakti ā, the first ā would rather have been written long (in open syllable; see below).

CrC is found in dēḇāvayat, dējamāspa-, dējiḥuṣṭa- and uzāmōhī (against dhaomā, ḍbomāla, ḍbaṣ-); it seems dependent on following long vowel.
2) before m, n:
   a. imn 9 x (for hacimnā 44.10c there are different readings; cf. hacimnā 43.10b.12d).
   b. int 19 x (int 4 x: hāntū, huzāntuš, visāntā (but visāntuš), xāntā(m)).
   c. ṯmV 5 x : smV 5 x
       ṯnV 14 x : smV 3 x
   d. word final mostly -ṇm, which mostly stands before a consonant. (Note that i, u before -m were lengthened.) At the end of the verse -m (47 x; two exceptions).
   e. monosyllables have ī.

There is a clear tendency for short e in closed syllable (a, b, d), ī in open syllable. (Note spēnta : spēnta-.)

3) always avi.

4) -ūni

5) ī, āh from ah.

6) -sng-, -sng.

The length of 5 and 6 is not easily understandable. With āu cf. āi.

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

6. a, ā
   a occurs in ao, and replaces (short) a before a syllable with u; ā occurs in ăi; in -ā < -au; -ā < -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 : ē and u : ē. (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 peculiarities 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 $\ddot{a}$- before words with $a$- is probably another instance.) Thus we saw that an $a$ is often lengthened before a long $a$ 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: $daduy\ddot{e}$, which was $/da\ddot{a}dvai/ [a]rap\ddot{a}$, where $a$- is a learned addition representing what was $\ddot{a}$ 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 PIE.

That length was phonemic is shown by $-i\ddot{s}$, $u\ddot{i}$ nom. sg. against $-i\ddot{r}$, $-u\ddot{i}$ 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. $a\ddot{s}\ddot{a} yec\ddot{a} < *a\ddot{s}\ddot{a}ya-ca$ 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, $pairice\ddot{a}$, $manahic\ddot{a}$, $hentic\ddot{a}$, $naficic\ddot{a}$ ($i$ and $u$ are always short before clitic); but also when the vowel was etymologically long: $kav\ddot{a}$ with $-\ddot{a} < *-\ddot{u}$ : $kuvac\ddot{a}$, $suv\ddot{a}$ nom. sg. $\ddot{a}$-stem : $suvac\ddot{a}$, $a\ddot{si}\ddot{c}a$ (instr.). Mostly the long vowel is found, be it an etymologically long vowel ($tuvac\ddot{a}$, $x\ddot{a}brac\ddot{a}$) or a short one ($mahyac\ddot{a}$, $a\ddot{s}\ddot{a}\ddot{y}ac\ddot{a}$). The long vowel before $-\ddot{a}\ddot{c}a$ 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, ʔ.

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 archaism 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 ʔ.

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 ʔ 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 ñh, when followed by i, ē, y or u. 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 -aini but -ani
-aini but -ani

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

On the other hand i is written after the prop vowel u: morangoidyai l-gdyai, āskūtilān lāktīml. Sometimes the u is itself coloured to i: mazīyi, yesiūi.

On ōniū, hušūti 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: aũũu, auruna-, pourū (acc. pl.), auruant-, haurvalai-, paourvalai-, tauruvaumnā.

On ušurū see 14.8n.

Prothesis Initial ri- is written iri-, ru- and rv- as uru-, urv-. The only Gathic forms are: irixta-, urūdōya-, urūraosi, 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 ōboi.ahi, ōrāyoidyai, jividad, 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 Gāthic, which makes it probable that other changes of the same kind are not Gāthic either.

The phonemic system we arrive at is the following:

\[
\begin{array}{cccccccc}
\text{p} & \text{b} & \text{f} & \text{m} & \text{v} & \text{u} & \text{ū} \\
\text{t} & \text{d} & \emptyset & \text{n} \\
\text{s} & \text{z} & \text{r} \\
\text{c} & \text{j} & \text{š} & \text{ž} & \text{y} & \text{i} & \text{i} \\
\text{k} & \text{g} & \text{x} \\
\rho & \text{h} & \text{a} & \text{ā} \\
\end{array}
\]

For the consonants this system is very close to Morgenstierne’s. Only y and s were not Gāthic phonemes in my opinion. Morgenstierne thinks that \text{pauṭaghum} and \text{hazagra} were already Gāthic and prove that y was a phoneme. For the first one might doubt that, and the second word can be interpreted as \text{hazaḥra}.

As to the vowels, Morgenstierne accepts ā, ə, e, o (length being irrelevant for ə, e, o), which were clearly not phonemes. For ə 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 -e was decisive, but Gāthic still had a diphthongue, /-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; and 3) errors and unexplained changes.

25.1 Later developments

\( \text{y} > ɨ \): \text{ainim} for older \text{anyōm} (which is also found in our manuscripts).

With preceding ɨ we have the same result:
\( \text{i} \rightarrow \text{i} : \text{masim for } *\text{mašiym}; \text{daibišm for } *\text{-tišm}. \) This development is normal in Late Avestan.

\( \text{a} \rightarrow \text{aē}. \) With preceding \( \text{a} \) a diphthong results: \( \text{vaēm for } *\text{vaym}, /\text{vayam}/. \)

\( (\text{i})\text{va} > \text{u} \) is parallel to the preceding. \( \text{fsratim for } *\text{-tuwm}, /-\text{tuʔam}/. \) In the 2 pl. middle ending \( \text{-dūm} \) for \( *\text{-dvēm} \) we have this development, but it is a later introduction of \( \text{u} \) for \( \text{v} \), because \( -\text{dvēm} \) in real language became LAv. \( \text{-Bōm} \) (the \( d \) became a fricative, and through it also the \( v \); and \( B \) did not become \( u \)); so \( -\text{dūm} \) is a form that never existed in real language.

\( \text{aō} > \text{ao}: \text{krnaon for } *\text{krnavaŋ}, /\text{krnavaŋ}/. \)

\( \text{ca, ja} > \text{ci, ji}: \text{jiŋm} \) (3 pl. subj. aor. of \( \text{gam}- \)) beside \( \text{jmyāt} \) (opt.) and \( \text{jamyāt}; \text{hacimnū} \) beside \( \text{hacōmnā}. \)

\( \text{hya} > \text{hē} \) in Zaraštārē in Y 53 (1a.3b). It is the LAv. ending. In the YH we find \( \text{vahehiš for } *\text{vahyahīš} \) (see VI 28).  

\( \text{šy} > \text{šy} > \text{s}: \text{šavīte for } /\text{šavaʔ}/. \)

\( -\text{ätē} \) for \( /-\text{ät-cal} / \) is probably due to the accent. In the Gathas it is found only in \( \text{aśātē} \) 28.10a, 32.4c and \( \text{virātē} \) 31.15c. So it is a later intrusion.

\( \text{aov} \) is sometimes found for \( \text{av}: \text{drigaove}, /\text{drigavai}/. \) For \( \text{auv} \) we find \( \text{aov}: \text{frazām}, /\text{fraʊvai}/. \)

\( \text{iu} \) appears as \( \text{uv}: \text{jua} \) (\text{juaa}, to be read /\text{juwa}/) for older \( \text{jiwa}- \). The development is known from later East Iranian languages. As there are traces of \( \text{iu} \) 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 \( \text{aibī aśā} \) [\( \text{aibī} \)] \( \text{vaēnhi vīspā} \) "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 \( \text{aibī} \) it would have 11 syllables.

Glosses have sometimes been inserted into the text. Thus in 28.10c \( \text{at uō xšmaibya aśāna vaēdā xaraitbya vaintyā srawā} \) the word \( xšmaibya \) is probably a gloss of \( uō. \) (There remains a 7-9 line if we read /\text{huʔarbi(?)a vanti(?)al}/.)

Very often words are split, e.g. compounds: \( \text{aibī.darštā-}, \text{vīspē.mazištēm} \) /\text{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. \( \text{ranyāskratīm}, \) which is /\text{ranyas-kriti}/. Other forms are also analysed, e.g. \( \text{gūšō,dūm} /\text{gušəd∧m}/ \) with the ending indicated. Here too strange things have happened, e.g. \( \text{dragvō,doḥiš} /\text{dragovadbiʃ}/ \) with instr. pl. ending -\( biš. \) A consonant may be written double: \( \text{gat,tōi, gat,te}, \) both for /\text{gatai}/. On -\( ō \) for final -a see 18.3.
First it should be observed that zaśyā-cā 53.8b was /zahiʔa-ocal/, so here ū is post-Gathic. This suggests (but does not prove) that ū was post-Gathic in general.

Gen. sg. -āxyā-cā against -ahyā without -cā is regular (aśyā-cā, aśaśyā-cā, aśaśaśyā-cā, spostaśyā-cā). This must be significant. The word accent was moved to the syllable before -cā.

The optatives will have had -yā- (Skt. bruṣyāt).

The nominal derivative presents had -yā-, cf. Skt. namaśyāti. Why srāvahyā- has no ū is not clear. It could be simply carelessness. It is dangerous to use it as evidence for old hy.

Of the pronominal forms aśyāī agrees with Skt. aśyāi, but for the other forms Sanskrit has tāśyās, tāśyai etc. Perhaps Gathic has the old accentuation.

Comparative vaśyā against vahyō is unexplained. (Perhaps the notation -aśyā was due to the pronominal forms in -aśyā.)

For daśyūṁ Skt. dāṣyū-, 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 (LĀv. daṇṭhaom, daṇṭhāva, OP daṇṭhāus) and probably had a shifting accent, so Gathic could have generalized suffix accent.

Hyāt has an unetymological ḫ-, which is not explained (did it indicate a voiceless ū-?), 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 ū is an allophone of hy before the accent.

2. ū, hrk, hrp

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

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

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 $x$ instead of $h$. This has been found to occur when the vowel after $h/x$ 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 $h > x$ shows that it must have been a dynamic accent.

The other indication is the appearance of $hrk$, $hrp$ and $s (= ś)$ 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 responsible for the development $h > x$. 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 $-āācā$ see II 25.1.
On $hv > x°$ see II 4.
Cf. also II 21.3 on $ā/əa$.

1. $x$

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

$x$ and $hy$ are found in Gothic in the following forms:

\[
\begin{align*}
\text{Gs.} & \quad -aśyā-cā & \quad \text{Gs.} & \quad -aḥyā \\
\text{Ds.} & \quad manaśyāi-cā \text{ YH} \\
\text{opt.} & \quad šyōm, šyāt \text{ etc.} \\
\text{opt.} & \quad saśyāt \\
\text{pres.} & \quad yasō.śya- \text{ etc.} & \text{pres.} & \quad srāvaha- \\
& \quad nomaśya- \text{ YH}
\end{align*}
\]
First it should be observed that \( ax\ddot{y}a - c\ddot{a} \) 53.8b was \( /zahi\ddot{y}a - c\ddot{a} / \), so here \( x \) is post-Gathic. This suggests (but does not prove) that \( x \) was post-Gathic in general.

Gen. sg. \(-a\ddot{x}y\ddot{a} - c\ddot{a}\) against \(-a\ddot{y}a\) without \(-c\ddot{a}\) is regular \((a\ddot{x}y\ddot{a} - c\ddot{a}, a\ddot{s}a\ddot{x}y\ddot{a} - c\ddot{a}, a\ddot{r}dra\ddot{x}y\ddot{a} - c\ddot{a}, u\ddot{x}\ddot{a}\ddot{x}y\ddot{a} - c\ddot{a}, s\ddot{p}on\ddot{a}\ddot{x}y\ddot{a} - c\ddot{a})\). This must be significant. The word accent was moved to the syllable before \(-c\ddot{a}\).

The optatives will have had \(-ya-\) \((\text{Skt. } b\ddot{ru}y\ddot{a}t)\).

The nominal derivative presents had \(-ya-\), cf. Skt. \( n\ddot{a}m\ddot{a}sy\dot{a}ti \). Why \( s\ddot{r}\ddot{a}v\ddot{a}h\ddot{y}a\) has no \( x \) is not clear. It could be simply carelessness. It is dangerous to use it as evidence for old \( hy \).

Of the pronominal forms \( a\ddot{x}y\ddot{a}i \) agrees with Skt. \( a\ddot{y}a\ddot{i} \), but for the other forms Sanskrit has \( t\ddot{a}sy\ddot{a}, t\ddot{a}sy\ddot{ai} \) etc. Perhaps Gastic has the old accentuation.

Comparative \( va\ddot{x}y\ddot{a} \) against \( vah\ddot{y}o \) is unexplained. (Perhaps the notation \(-a\ddot{x}y\ddot{a} \) was due to the pronominal forms in \(-a\ddot{x}y\ddot{a}\).)

For \( da\ddot{x}y\ddot{u}m \) Skt. \( d\ddot{a}sy\ddot{u} - \), 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 \((\text{LAv. } d\ddot{a}y\ddot{h}\ddot{a}om, d\ddot{a}\ddot{i}g\ddot{h}\ddot{a}\ddot{a}v\ddot{h}, \text{OP } d\ddot{a}sy\ddot{au}st\) and probably had a shifting accent, so Gathic could have generalized suffix accent.

\( hy\ddot{a}t \) 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 \( \ddot{y}y \) is an allophone of \( hy \) before the accent.

2. \( s, hrk, hrp \)

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 \( s \), transcribed \( s \) \((=\ddot{s})\).

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

<table>
<thead>
<tr>
<th>Comp. ntr. pl.</th>
<th>Gs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( vaxyo )</td>
<td></td>
</tr>
</tbody>
</table>
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**

- **-la-** \( \text{-tā-} \) root nouns
- **-ti-** \( \text{-tāi-} \) \( \text{-a-} \)
- **-tu-** \( \text{-tar-} \) other

**Compounds**

Determinatives in vb. noun/adj. general with \( \text{-t-}, \text{-la-}, \text{ti-}, \text{-tar-} \) in subst.

Bahuvrihi’s

Governing compounds

2.1 Survey

The forms with \( s, \text{hrk or hrp} \) in Avestan are (\( G = \text{Gthic, H = YH} \))

**simplicia**

<table>
<thead>
<tr>
<th>root</th>
<th>compounding</th>
</tr>
</thead>
<tbody>
<tr>
<td>-la-</td>
<td>G āṣa-</td>
</tr>
<tr>
<td></td>
<td>G ṛṣav-</td>
</tr>
<tr>
<td></td>
<td>G maṣa-</td>
</tr>
<tr>
<td></td>
<td>H amaṣa-</td>
</tr>
<tr>
<td>-ti-</td>
<td>G āṣi-</td>
</tr>
<tr>
<td>-tu-</td>
<td>paṣu-</td>
</tr>
<tr>
<td>-tāt-</td>
<td>kahrkatāt-</td>
</tr>
<tr>
<td>-tar-</td>
<td>bāṣar-</td>
</tr>
<tr>
<td>root</td>
<td>G kahrp-</td>
</tr>
<tr>
<td>-a-</td>
<td>kahrka-</td>
</tr>
<tr>
<td></td>
<td>mahṛka-</td>
</tr>
<tr>
<td></td>
<td>vāṣa-</td>
</tr>
<tr>
<td></td>
<td>uḥṛka-</td>
</tr>
<tr>
<td>other</td>
<td>poṣanā-</td>
</tr>
<tr>
<td>G maṣya-</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>compounding</th>
</tr>
</thead>
<tbody>
<tr>
<td>G poṣā-.tanū-</td>
</tr>
<tr>
<td>G poṣā-.cingha-</td>
</tr>
<tr>
<td>H fravaṣi-</td>
</tr>
<tr>
<td>stahr-paēsah-</td>
</tr>
</tbody>
</table>
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-

*asa- 'the Cosmic Order, Arta'. The word differs from Skt. rtá- both in accent and vocalism. Compounds present forms with -rt-: an-arsta-, idjatarta-1, arštō.karaθna-, Astuav- and Ux*jat rents- (see also on the compounds). A first problem concerns the last two forms, which are names. It has been assumed that *astuavta- was coined from Y 43.16 astuv āsom (and ux*jat after astuv-), 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. īr-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, *ārta- beside *rta-. We must start, then, from Ilr. and Plr. *rta-.

There are no other forms where r- became ar- in Avestan (one could only compare -aras > LAv. -arš-). As there are no instances of *ṣ-, one might suppose that *ṣ- became as-, but this is contradicted by the compounds with /ar ta- (unless the -a- was introduced from asa-). The evidence of /ar ta- suggests that *rta- became /ar ta-, and that then the accent was drawn to the first syllable, but both developments are unexplained.

asa- 'ground' The full grade may have been generalized, but Gr. points to a disyllabic root, which explains ar- < *hylh₁-. This must have got the accent. Cf. on the first asa-.

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

darsta- m. 'Schmerz' N 15. From dar- 'to split'.

darsta-, darstam from dar- 'to hold'.

karsta- 'Kleidungstück (?)' N 87 only. Perhaps identical with the following, karatōsca 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. karati-; Bailey, Zor. Problems 8 n. 2.

marsta- 'man', Skt. márta-. It may have changed its accent after *mṛtā- (but see the next) and/or marstan-.
maṣa- 'gestorben' V 5.61. We expect *mṛtā-. Was it taken from amaṣa-?
palārta- 'fliegender', 'winged'. Hardly any Sanskrit evidence.
sarata- 'kalt'. Lith. šālas. Russ. xolod. These words have final accent.
*k'oIHū-, Av. can also be *k'loHū-.
θβaśa- 'eilig, rasch'. Cf. Skt. tvārāte, tūrtā-. The form can have old full
or zero grade as it was a disyllabic root; in the latter case it is identical
with Sanskrit tūrtā-, but the accent does not agree.
θβaśa- 'firmament', orig. 'the one who hurries', cf. Skt. tvā-
vartā- 'gefängen'.
xvāsa- n. 'Essen'.
zarata- 'altersschwach'. Disyllabic root, Skt. jīryati. (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.
asī- f. 'lot, reward'. No Sanskrit equivalent. See on the next.
?arati- idem, is doubtful; only P 39, ms. ā rvūimeca. The accent was
drawn to the syllable before -ca.
(*arati- f. 'Energie' has only forms with -θ-.)
jarati- '?'.
karati- Kleidungsstück.
martī- 'Sterben'. Skt. mṛti- is late.
θanvarati- 'Bogen'.
xvarati- f. 'Essen'.

22c. Nouns in -tu-

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

<table>
<thead>
<tr>
<th></th>
<th>GAv.</th>
<th>LAv.</th>
<th>LAv.</th>
</tr>
</thead>
<tbody>
<tr>
<td>parstuś</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>-tūm</td>
<td>4</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Ls</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-tō</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-tā</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ap</td>
<td>2</td>
<td>1 (Np as Ap)</td>
<td></td>
</tr>
<tr>
<td>-tūś</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-θβō</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Compounds cinvat.parstu- 6 times

posu.pā V 13.9 (see on det. comp.)
The original mobile accent (Oic. fjur < *pērtus, OHG furt < *prtū-) can
hardly be the origin of the two different forms: of the attested forms only
posauo should have had poral-. 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 poratu- is the old form, posu- 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 ri > ș 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. poratu- was not replaced by posu-, just like idjitar-1 was not replaced (in the text of the Gatha’s) by -asa-. LAv. poratu- can be Gathic influence.

22d. Nouns in -tā-

carštā- ‘Rennbahn’
Sanskrit has the accent on the syllable before -tā-, but cf. Gr. ἄρετή, γενετή.

22e. Nouns in -tāl-

In Sanskrit accented on the preceding -a-.
kahrkātāl- Name des Hahns. Contains fixed kahrka-.
lkarpātāl- ‘karpan-hood’.

22f. Nouns in -tar-

bāxar- ‘Reiter’
haratar- ‘der wacht über’
xvāsar- ‘Trinker’.
In Sanskrit both root and suffix can be accented.

22g. Root nouns

kahrp- ‘form, body’
The accent on the root has been generalized from the nom. acc. sg. and nom. pl.
*marhk- has only marxī; Kellens 1974, 60.
porl- ‘Streit’. Only poritasca, where the accent was drawn to the syllable before -ca. But stem final -s was not tolerated; see the conclusion.

22h. Nouns in -a-

kahrka- Ruf des Hahns; onomatopoea.
mahrka- m. ‘death’, Skt. markā-. Note Gath. marakaēca /markai-ca/. There are some derivatives, which retain mahrka-.
kahrpuna- Name eines daevischen Tiers.  
karapăn- /karpan-/. This word has -an-, not -ān- ( < *-on-), in the oblique cases, and these words had suffix accent.

marstăn- 'mortal'. This words has -ān-. These words had mobile accent.
masya- 'man', Skt. mārya-.
narápīś- 'decline'. The neuters in -ī have suffix accent in Sanskrit.

p̄śanā- 'Kampf', Skt. pīḷanā-.

carākṣaṭā-tra- 'hymn of commemoration'. Sanskrit words in -tra- indicating instruments are barytona (II 2 §517a; differently on carākṣaṭā-tra- 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. dājī. arāta- under the a- of arāta-.

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-, -la-, -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).

carātū-āra- 'über die Länge eines c. hinausgehend'.
nasu-kāsa- 'qui découpe les cadavres' (Kellens 1974, 309), and
**THE ACCENT**

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

- **karātō baēsaza-** ‘qui guérit avec le couteau’,
- **karātō dasu-** ‘qui blesse ’,
- **garādo karāt-** ‘qui coupe la vésicule’,
- **nasa(m).karāt-** ‘qui découpe les cadavres’,
- **zarādo.karāt-** ‘qui coupe le coeur’ Kellens 1974, 308ff. One expects -kṣ-, 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 -kṛt-.

- **hakarot** ‘éminental’ -(gan- ‘au- -tòtend’), Skt. sakṛt. If the accent was on the second member, see the section on -t-.

- **baēsaza.kasa-** ‘cueilleur de remèdes’, Kellens 1974, 309, probably contains -kṛt-a- which seems to have had the accent on the root; cf. -kasa-above.

- **amaratātāi-, amaratāt-** ‘immortality’ (as against amāsa-).

- ***ahu.mshrk-** ‘Leben zerstörend’ has only -mrrxš and -mrrc-; Kellens 1974, 60.

- **masyā.jata-** ‘von Menschen getötet’ and
- **masyā.vapha-** ‘den Menschen bekleidend’ will contain masya-unchanged.

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

- **frāl.t.carata- = /fra-tacar-ta-/ ‘fliessend’. No clear Skt. parallel.
- **vshrkā.borata-** ‘von Wölfen getragen’, and
- **vshrkā.jata-** ‘von Wölfen getötet’ contain fixed vshrka-.

- **/fravrat/ (fraorēt) ‘continuously’ or ‘avec zèle’. See on -t-.

**Forms in -t-**

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

- **aś bōrat-, ā- vayū-, vāstrō-, (vāstram-), vohu-, husham- ‘...bringend’
- **ātro karat-, duś-, pāś- ‘...machend’.
- **huvārat-, taxmārat-, wyrārat-, vazārat-, zanyārat- ‘...sich aufmachend’, /huva-t-/- etc.
- **ratus.morat- ( /ratu-śm-/- ‘qui mémorise les règles’ Kellens 1974, 143
- **ham.storat- see **ham.storata-.
- **-dorat- see Kellens 1974, 132.

Apparently a stem in -f < -ft was not tolerated; cf. above and the root noun /pri-/.
Forms in -ta-
Compounds in -ta- accent the first member in the oldest Sanskrit (II 1 §93). Later they become mostly oxytona.

-araḥṣyō., barṣa-, hu-, niṣ-, spō-, vayō-, vātō-, uḥrko-, yasō- ‘...vertragen, gebracht’

a-dārsta- ‘nicht geerntet’.

frōrra- < *fra-ṣ-ta- n. ‘Zuweisung’. Perhaps oxytone according to §93a.

a-paiti.ṣrta- ‘ungehindert’.

ā-gerṣpta- n. ‘Bedrohung mit bewaffneter Hand’.

uz-gerṣpta-, an-aipī- ‘...gehoben’

hu-kerṣpta- ‘schön geformt’.

dahmō.kersta-, dāityō-, hu-, tanu-, xṣābrō-, yasnō-, ‘...gemacht’.

upa.narsta-, hu-fra-, vacō-, aiwi-smarsta- ‘...aufgesagt’.

a-sarsta- ‘nicht gebrochen’.

hu-starsta-, xvaini-, ham- ‘...gedeckt’.


a-starsta- ‘nicht niederzuwerfen’, Skt. dṣtrta-.

an-a-stṛṣom ‘ohne sich zu versündigen’.

fra-varsta- from ?uar- ‘to choose’.

a-xvarsta- ‘unfassbar’.

an-ā-zarsta- ‘nicht erzürnt’.

But anaṣa- ‘ungemahlen’ has unchanged əṣa-

Different are

amṣa- ‘immortal’, agrees with Skt. amṣta-.

yaṣṭa.kaṛṣtām ‘bei richtiger Bereitung’, Skt. yathākṛṣtām.

Nouns in -ti-
Accentuation as with -ta-, on the first member, rarely oxytone.

Wit zero grade -srsti-:

-barṣti- (aṣ-, fra-, duž-, gāmō-, ham-, hu- (fra-), niṣ-, paiti-, upa-, uṣṭā-, vantā-, vāxś; a-iniṣ-)

-srsti- ((a)frōṛti-, frōṛti-, paiti-)  

-gerṣpti- (ī-)  

-karṣti- (ā-, fra-, fraštō-, han-, ṛānyō-sk., vohu-, yasnō.)  

-marṣti- (ava-, fra-, hu-, hu-fra-)  

-psrṣti- (ā-)  

-stṛṣti- (barstmo-., an-ā-)  

-wṛṣti- (ā-, fraṃṛṣti-, ham-, vistō.fra-)  

With (partly graphic?) -srsti-:

-harṣti- (niśāṃharṣṭayaēca)  

-jarṣti- (aīti-)
With -āsī- only:

fravasī- ‘Fravāši’ from *pra-urHti- from var- ‘to choose’. In Sanskrit these forms are rarely paroxytonon (su-sākti-$\S$94b). The same situation is found in Avestan. But the fact 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).

- bārstar- (ā-, fra-)
- hārstar- (ham-b-, vāh-ham)
- cārstar- (frāśō.)
- ārstar- (niś-)
- ājarstar- (aibi-)
- mārstar- (fra-)
- vārstar- (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 accented, mostly on the last syllable (§105b).

- cāratu. drājah- ‘the length of a c.’. Or bahuvrihi?
- astvāt. srota- name of a Saoṣyant, orig. ‘der das leibhafte Recht ist’. Cf. uṣyāt. srota- (gov. comp.), and see on aṣa-.
- hunarstāt- ‘skill’. (Skt. sunjtā does not have the same suffix, and also differs in having the zero grade of nar-.)
- cinvat. purotu- ‘the Bridge of the Cinvat’.
- zm. vārsta- ‘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.
The second member is accented after a(n)-, su-, dus- (§114a), and after disyllables in -i, -u (§114d).

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

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

carátu. drájah- 'with the length of a c.' Or is it a determinative?


a-ðaráñ. tkañña- 'der den Lehrer nicht achtet' probably accented a-.

aiti. arásñ. gátna- 'der einen fest zugewiesenen Platz hat'.

aiti. arásñ. gátna- idem. Both these words also with an-.

uízgoráñ. drañña- 'with (the) banner raised high'.

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

länu. khorpn- 'die Gestalt der eigenen Person habend', and

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

as pó. khrpna- 'ayant la forme d’un cheval', and

maxši. khrpna- 'with the form of a fly'; khorp- will be the form of the simplex.

jaini. mahrka- unclear; cf.

vispó. mahrka- 'qui cause la destruction de tout'. Contains mahrka-

unchanged.

paráñ. lantū- 'whose body is due, forfeited';

pósó. lantū- idem;

pósó. sarà- 'whose head etc.';

apórñ. lantū- 'makellosen Leibes';

pósó. cingha- 'mit weit auseinandergezogenen Klauen';

pósó. parna- '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 *prta-. This would agree with paráñ-, but this form occurs only N 42 and V 7.52 in a citation in the pehlevi-translation, whereas pósó. lantū- occurs ten times. Therefore paráñ- will be a restored form (aro- could be graphic for -pro-). We must posit *prta-. Cf. maña-.

xvaini. staráñtu- 'mit schöner Decke'.

ništárñó. spaya- 'mit hingebreiteten Kissen';

staráñ. barasman- 'with the b. spread out' have regular *strtá-. 
These compounds have the accent on the first member in Sanskrit (II 1 §120a).

dājī. arata- 'violator of Arta'. In LAv. we find jī. asa- after the noun asa-.

ux̆yat. arata- name of a Saošyant; litt. 'das heilige Recht mehrend'.
vikara. ušlana- 'das Leben zerstörend'. The forms in -Cr-t- never present -s-.

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

hara. avaratā- 'Kostbarkeiten bringend'.

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:

fšrata- I read as /šratu/, which is not relevant.

*maša- 'man' seems not to exist. See Insler on Y 29.11a, who reads

*mam asa for mā maṣā.

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

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

25a. Simplicia

The words in -ti-, -tu-, lā-, -tāl-, -tar- have no exact equivalents in Sanskrit. With the other formations the situation is as follows:
THE ACCENT

agrees with Skt.
does not agree

-\(\text{ta}\)-

(\(\text{a} + \text{sa}\)-
(\(\text{a} + \text{s} + \text{a} + \text{v}+ \text{a}\)-
(\(\text{\theta} + \text{b} + \text{a}\)-
-mar\(\text{a}\)-

root \(k\text{ahr}\text{r}-
*\(k\text{f}\text{r}\)-
mahr\(\text{r}k\)-
mahr\(\text{r}k\)-

other \(m\text{asy}a\)-
\(\text{m} + \text{\r} + \text{t}\)-
\(\text{p}\text{\r} + \text{\a}\)-

As to the forms not agreeing, \(a\text{sa}\)- presents several problems; \(a\text{s} + \text{a} + \text{v}+ \text{a}\)- goes together with it; \(\text{\theta} + \text{b} + \text{a}\)- can be a different formation than \(\text{t}\text{\r} + \text{\a}\)- (i.e. \(*\text{i} + \text{\r} + \text{\a}\text{\r} + \text{\a}\)-). So really only mar\(\text{a}\)- and mahr\(\text{r}k\)- 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.

-\(\text{ta}\)- have:

\(\text{a} + \text{sa}\)-
\(\text{m} + \text{\a}\)-
\(\text{\theta} + \text{b} + \text{a}\)-
\(x + \text{\a}\)-

\(\text{d} + \text{\r} + \text{\a}\)-
\(\text{d} + \text{\r} + \text{\a}\)-
\(\text{p}\text{\r} + \text{\a}\)-
\(\text{s} + \text{\r} + \text{\a}\)-

\(\text{C} + \text{\r} + \text{\a}\)- has both accentuations; this is what one would expect. But we would expect that \(\text{C} + \text{\r} + \text{\a}\)- would be oxytonon. \(\text{m} + \text{\a}\)- is strange, but compare \(\text{p}\text{\r} + \text{\a}\text{\r} + \text{\a}\)-. Note that \(\text{a} + \text{sa}\)- from \(*\text{i} + \text{\r} + \text{\a}\)- has the same unexpected accent.

-\(\text{ti}\)- agrees with Sanskrit in being oxytone \(-\text{\a}\text{\r} + \text{\r} + \text{\a}\)+; only \(\text{a} + \text{si}\)- would be paroxytonon, which accent occurs in Sanskrit too.

-\(\text{tu}\). Only \(p\text{\r} + \text{\a}\text{\r} + \text{\a}\)-. Sanskrit accents both root and suffix of \(\text{u}\)-stems (II 2 §488a).

-\(\text{ta}\)- \(\text{c} + \text{\r} + \text{\a}\)- disagrees with Sanskrit, but agrees with Greek.
-\(\text{t} + \text{a}\)- agrees with Sanskrit \(-\text{\a}\text{\r} + \text{\a}\)- (\(k\text{ahr}\text{r}k\)- being a fixed noun).
-\(\text{t}\text{\r}\text{a}\)- shows both accentuations, as in Sanskrit.

Other formations. Note that \(\text{n}\text{\a}\text{\r} + \text{\a}\text{\a}\text{\r} + \text{\a}\text{\r} + \text{\a}\text{\r}\)- and \(\text{k}\text{\a}\text{\r} + \text{\a}\text{\r}\text{\a}\)- agree with the corresponding Sanskrit categories, and that \(\text{m} + \text{\a}\text{\r} + \text{\a}\text{\r} + \text{\a}\)- 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. asa-, kohrp-, masya-, poṣanā-, vohrka-.

Forms that have an exact counterpart in Sanskrit:

agree with Skt. do not agree
amaṣa- aṁṭa-
asaṭṭa- āṣṭṭa-
yāṭa, kṣatam yathāḍṛtām
(an-arṣṭa- āṇṛṭa-) The separate categories give the following picture.

Determinatives in vb.noun/adj.
-t- stem final -ṛ was not tolerated;
-ta- agree with Sanskrit;
-ti- agree with Sanskrit (also fravaśi-?);
-tar- agree with Sanskrit.

Determinatives in a substantive: agree with Sanskrit. Bahuvrihis are less clear. A remarkable agreement is stohr-paēsah-. kohrp- will have been influenced by the noun kohrp-. On poṣa- (two forms) see above on maṣa-. The difference poṣ. [tan]u- : aporṣ. [tan]u- seems to confirm that they are the regular outcome of *prta- : āprta- (or *āprta[tan]u-?).

Governing compounds agree with Sanskrit. Most remarkable are adjārta- and uṣṭat.ūṛta-.

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 /markat-ca/ Y 31.18c. Further we find this phenomenon perhaps in ā rāṭimcā if this is *arṣimcā beside asī-, and in kṣrāṣcā (cf. kṣrāṣcā) beside kṣa (kṣa-). (F 3h koṭṣomcā probably has kṣr̥f- from the nominative kṣr̥f.)

26. Date

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

/martā-/ is found only in Gothic. It cannot be excluded that it was *māṛta- and that Gothic did not have the development to hri, s; as it did not or rarely occur in LAv., it was not replaced by *maṣa- in the Gothic text. (Influence of maralan-., and *mṛtā-?, is also possible.)

masya- in Gothic 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 (*kahrp-* in all forms, compounds with the form of the simplicia), forms like *mahrka- : markai-cal* coexist and, even more remarkable, *asa-* beside *arte-* in compounds (note that *djitarta-* is indeed replaced later by *jii.asa-*). 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 *s* was not a phoneme in Gāthic, so that it is sufficient to note the accent: *märka-, markai-cal*.

3. Final conclusions

Both phenomena indicating the place of the accent (*x* and *s* 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 *s* etc and for *x* (see on *zaxya-cā* in section 1) there is some indication that the developments from which we draw these conclusions, are themselves post-Gāthic. If *hu > xu* was due to the accent, it is parallel to *hy > xy*. We saw that *xu* is post-Gāthic. *-āte-cā* for *-āte-cā* shows that the accent was drawn to the syllable before *-ca*. We saw that this accent-shift caused *hy > xy*. As *-āte-cā* is post-Gāthic, the accent-shift was also post-Gāthic. Thus the whole complex of phenomena was post-Gāthic.
CHAPTER FOUR

HISTORICAL PHONOLOGY

1. Introduction

1.1 The PIE phonemic system

<table>
<thead>
<tr>
<th>Stops</th>
<th>Labials</th>
<th>Dentals</th>
<th>Palatals</th>
<th>Velars(?)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>p</td>
<td>t</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td></td>
<td>b</td>
<td>d</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td></td>
<td>bʰ</td>
<td>dʰ</td>
<td>gʰ</td>
<td>gʰ</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>i</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td></td>
<td>'p</td>
<td>'i</td>
<td>k</td>
<td>k</td>
</tr>
<tr>
<td></td>
<td>pʰ</td>
<td>ĝʰ</td>
<td>kʰ</td>
<td>kʰ</td>
</tr>
<tr>
<td></td>
<td>tenuous</td>
<td>media</td>
<td>aspi-rate</td>
<td>fortis</td>
</tr>
</tbody>
</table>

new interpretation:  
plain pregglott.  
aspir.

<table>
<thead>
<tr>
<th>Sibilant</th>
<th>Liquids</th>
<th>Nasals</th>
<th>Semi-vowels</th>
<th>Laryngeals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>s</td>
<td>m</td>
<td>i</td>
<td>h₁</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>u</td>
<td>h₂</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>h₃</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vowels</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>e</td>
<td>o</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>ê</td>
<td>ō</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>PIE</th>
<th>Av.</th>
<th>OP</th>
<th>Skt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>p</td>
<td>b</td>
<td>p</td>
<td>b</td>
</tr>
<tr>
<td>t</td>
<td>d</td>
<td>i</td>
<td>d</td>
</tr>
<tr>
<td>k</td>
<td>g</td>
<td>θ</td>
<td>d</td>
</tr>
<tr>
<td>kw</td>
<td>g</td>
<td>s</td>
<td>z</td>
</tr>
<tr>
<td>k</td>
<td>g</td>
<td>k/c</td>
<td>glj¹</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>glj²</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>glj³</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>gh/h¹</td>
</tr>
<tr>
<td>s</td>
<td>slʃ/l</td>
<td>s/ʃ²</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>l</td>
<td>r</td>
<td>(l)</td>
</tr>
<tr>
<td>m</td>
<td>n</td>
<td>m</td>
<td>n</td>
</tr>
<tr>
<td>i</td>
<td>u</td>
<td>i</td>
<td>u</td>
</tr>
<tr>
<td>H</td>
<td>i/ə²</td>
<td>i/ə⁵</td>
<td>i/ə⁵</td>
</tr>
<tr>
<td>e</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
<tr>
<td>ê</td>
<td>a</td>
<td>a</td>
<td>a</td>
</tr>
</tbody>
</table>

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. \( e, \ j, \ h \) before PIE \( \ddot{e}, \ i. \)

2. \( \ddot{s}, \ s \) 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. \( \ddot{a} \) 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. \( \text{pá}i\text{î} \), Gr. \( \text{pós}s\text{i} \).

/paru/- ‘much’, Skt. \( \text{púrú} \).

/k\text{rpam}/ ‘form’ As, Skt. \( \text{k\text{rp}}\text{p} \), Lt. corpus.

\( t \)

/tanu>-/- ‘body’, Skt. \( \text{tanú} \).

/\text{t}ámah/- ‘darkness, Skt. \( \text{tá}m\text{á}s \), Lat. temere ‘blindly’.

/\text{z}au\text{t}ar/- ‘priest’, Skt. \( \text{hó}\text{t}a\text{r} \).

\( k \) > \( s \)

/sā\text{st}i/- ‘to teach’, Skt. \( \text{sásti} \).

/s\text{ra}vah/- ‘teaching’, Skt. \( \text{srá}v\text{a}s \), Gr. kléos.

/d\text{a}\text{rs}am/- ‘I saw’, Skt. \( \text{á}\text{d}\text{a}r\text{s}\text{ám} \), Gr. dérk\text{omai}.

/k\text{w} > k\); \( c \) before PIE \( \ddot{e} \), \( i \)

/k\text{a}\text{t}a\text{r}a/- ‘which of the two’, Skt. \( \text{kata}r\text{á} \), Gr. póteros.

/k\text{i}\text{m}á/- ‘punishment’, Gr. poiné.

/c\text{i}s/- ‘who?’, Gr. \( \text{tis} \), Lat. quis.

/h\text{ac}a\text{t}ah/- ‘to follow’, Skt. \( \text{sác}\text{ate} \), Gr. hépomai, Lat. sequor.

/v\text{a}c\text{ah}- ‘word’, Skt. \( \text{vác}\text{as} \), Gr. épos.

/k\text{w} > k\); \( c \) before PIE \( \ddot{e} \), \( i \)

/k\text{n}a\text{i}>- ‘girl’, Skt. \( \text{ka}\text{ny}ā \) if to Gr. kainós ‘new’ as *konHí-.

/k\text{r}p/- ‘form’, Skt. \( \text{krp} \), Lt. corpus (perhaps *k\text{r}p\text{p} -).

(With \( x \)- according to 31 /\text{xrůra}- ‘cruel’, Skt. \( \text{xrú}\text{rá} \)).
HISTORICAL PHONOLOGY

b
No certain evidence
bh > b
/brātar-/ ‘brother’, Skt. bhrātar-
/bhumi-/ ‘earth’, Skt. bhūmi-
/nabha-/ ‘cloud’, Skt. nābha-, Gr. nēphos.

d
/daiva-/ ‘daeva’, Skt. deva-
/vaidai ‘I know’, Skt. veda-
/madai ‘drink’, Skt. māda-
dh > d
/dāraya-/ ‘to hold’, Skt. dhāraya-
/vardati/ ‘to grow’, Skt. vārdhati.
g > z
/zauša-/ ‘pleasure’, Skt. jōsa-
/vrza-/ ‘to work’, Gr. ἐργον.
/rzu-/ ‘straight’, Skt. rju-
gh > z
/zasta-/ ‘hand’, Skt. hāsta-
/zūti-/ ‘call’, Skt. -hūti-
/hizau-/ ‘tongue’, Skt. jihvā, OCS jēzykō.
hazah-/ ‘power’, Skt. sāhas-
gw > g; j before PIE ë, i
/gmanai ‘they came’, Skt. dgmān, Gr. bainō.
/gnai ‘woman’, Skt. gnā-, OIr. mná.
/jani-/ ‘woman’ < *gwenh₂-, OIr. ben.
gwh > g; j before PIE ë, i
/garma-/ ‘heat’, Skt. gharmā-, Gr. thermós.
jadyāi/ ‘to slay’, Skt. jan-, Gr. theinō, épephnon (j- here analogical).
g > g; j before PIE ë, i
/ugra-/ ‘strong’, Skt. ugrā-
/auγah-, Is laujahāl ‘strength’, Skt. ójās-
gh > g; j before PIE ë, i
/darga-/ ‘long’, Skt. dīrghā-, Gr. dolichós.

23. Palatalization

Before PIE ë and i (including i before vowel) IIr. k, g were palatalized.
We find:

<table>
<thead>
<tr>
<th>PIE</th>
<th>k(w)</th>
<th>g(w)</th>
<th>g(w)h</th>
</tr>
</thead>
<tbody>
<tr>
<td>before ë, i Av.</td>
<td>c</td>
<td>j</td>
<td>j</td>
</tr>
<tr>
<td>elsewhere</td>
<td>k</td>
<td>g</td>
<td>g</td>
</tr>
</tbody>
</table>
For examples see above.
For \( k_i > *cy > \dot{sy} \) see 35c.

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

\[
\begin{align*}
\text{Av. /augah/} & \quad \text{Skt. \( \dot{\text{ojas}} \)} & \quad \text{PIE \( *\text{h}\dot{\text{euges}}- \)} \\
\text{/augəh-/} & \quad \text{\( \dot{\text{ojas}}- \)} & \quad \text{\( *\text{h}\dot{\text{euges}}- \)}
\end{align*}
\]

From the root /aug-/ we have:

inj. /au̯-il/ (but ind. /au̯-ail/, sub. /au̯-āil/)

\[
\begin{align*}
/\text{aug-žal/} \\
/\text{aug-dal/}
\end{align*}
\]

Here we find the palatalized form generalized before vowel.
Root aorist of \( \text{gam-} \) ‘to go’:

3s inj. \( /\text{jan}/ \) Skt. ind. \( \dot{\text{agan}} \)
sub. 1s \( /\text{jamā}/ \) etc. Skt. \( \dot{\text{gāmāni}} \) etc.
impr. 2s \( /\text{gadi}/ \) Skt. \( \dot{\text{gadhī}} \)
3s \( /\text{jantul/} \) \( \dot{\text{gāntu}} \)

It also happened that Avestan introduced the other representation:

pres. stem \( /\text{jasa-} / \) Skt. \( \dot{\text{gaccha-}} \).

3. Clusters with a stop

Compare the survey in 38.

31. Stop + consonant

Voiceless stops became fricatives before any consonant:

\( p > f, l > \theta, k > x \)

/\text{frai/}, Skt. \( \dot{\text{prá}} \).

/\text{kamnafsva-} ‘small herds’, ef. /\text{pasu-}/

/\text{θva-} ‘your’, Skt. \( \dot{\text{tvā}} \).

/\text{manθra-}/, Skt. \( \dot{\text{mántra}} \).

/\text{xratu-}/, Skt. \( \dot{\text{krātu}} \).

/\text{xšapā-} ‘evening’, Skt. \( \dot{\text{kṣap}} \).

An exception is \( -pt- \), which remains unaltered:

/\text{hapti}l 3s : /\text{hafti} 2s.

/\text{haptaθa-} ‘seventh’, Skt. \( \dot{\text{saptátha}} \).

/\text{ptāl} ‘father’ (but /\text{θrai/} Ds with \( \theta r < \text{ir} \) and \( \theta θ < \text{pθ} \); thus also

/\text{rafθra-} ‘support’, root /\text{rap-}/).

A preceding \( s \) prevents the development:

/\text{stramal/} ‘star’ Gp.

/\text{āskti-} ‘union’.
Before vocalic r the stop was not changed:

/pra-sa-1 ‘ask’, but aor. /fra-s-1 (‘prek-s-‘).
/lātrml ‘fire’ As, but gen. lāṭrah1.

Before the PIE suffix -io- we find the spirant, as in /huṣya-1 ‘true’, Skt. satya-.

But when Sievers’ Law operated we have the stop:

/naptia-1 ‘descendent’ (unless we have here the suffix -iɾa-, 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.

/paṭ/a-1 ‘path’ Ls, Skt. pathi.
/prū-u-1 ‘broad’, Skt. prthu-.
/hapta-ə-1 ‘seventh’, Skt. saptātha-.

Here too a preceding s prevents the development:

/vaistal ‘you know’, Skt. vēttha (LAv -θa, Skt. -tha < *-th2e).

Note. On fθ, xθ > fθ, xθ 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).

vṭ > st, Skt. ṭu(h)

/lcisti-1 ‘thought’, Skt. cūṭi- from cit-.
/lvaistal ‘you know’, Skt. vēṭtha < *uoids-th2e.
/ladastal ‘he gives’ < *da-dH-tai.

This development must be of later date than the development s > ṣ after i, u, r, k, as is shown by /lcisti-1.

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

/lazdya-1/ ‘to put’ < *da-dH-dyāi.

/lazdale-1 ‘he puts’ < *da-dh-H-tai (with ḍh > dh according to Bartholomae’s Law).

/lazdāl/ adv. ‘certainly’, Skt. addhā.

/laizdvam/ ‘to find’ 2p. *vaid-dvam.

32b. k, ḍ + dental > ṣt, ḍd

/vaṣṭal ‘he wants’, *uek-ṭi, Skt. vaṣṭi.

/labi-dirṣta-1 ‘visible’, *-drk-to-.

/lgraṭda-1 ‘he complained’, *g(u)r̥gh-to (or with l instead of r); cf. 1s lgraṭail, Skt. grhe.

/lazdyāil inf. of /nas-, ṣas-1 < *h₁n(ə)k-.
32c Labial + k > š, syll. /šuvant-/ ‘cattle-breeder’, *pku-.

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 *gḥt > Skt. gdh, Av. gd. This development must have occurred before the loss of the aspirates in Iranian. Aspirate + s has the same development, *gḥs > *gḥz > *gz > gz (the z became z after labials and velars, see 46. Later the stop became a spirant, γ̹z̹, see II 5).

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

<table>
<thead>
<tr>
<th>PIE</th>
<th>Pllr.</th>
<th>GA. bdh</th>
<th>OP</th>
<th>Skt. bdh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ḗḥt</td>
<td>Ḗdh</td>
<td>zd</td>
<td>(st)</td>
<td>ddh</td>
</tr>
<tr>
<td>ḏḥt</td>
<td>ḏdh</td>
<td>ṣd</td>
<td></td>
<td>ṣdh</td>
</tr>
<tr>
<td>ḡḥt</td>
<td>ḡdh</td>
<td>gd</td>
<td>(xt)</td>
<td>ḡdh</td>
</tr>
<tr>
<td>bḥs</td>
<td>bž</td>
<td></td>
<td></td>
<td>ps</td>
</tr>
<tr>
<td>ḏḥs</td>
<td>*z</td>
<td></td>
<td></td>
<td>is</td>
</tr>
<tr>
<td>ḡḥs</td>
<td>ž</td>
<td></td>
<td></td>
<td>ks</td>
</tr>
<tr>
<td>ḡvḥs</td>
<td>gz</td>
<td></td>
<td></td>
<td>ks</td>
</tr>
</tbody>
</table>

bḥt > bd, Skt. bdh
No examples.

dḥt > PIIr. Ḗdḥ > Av. zd, Skt. ddh
/srzd-a/ ‘complete, mature’ < *urdḥ-to-, Skt. vrdḥdā-.
Here the development occurred even though a sibilant had developed between the dentals.

*gḥt > gd, Skt. gdh
/lauḍa/ ‘he said’ < *auḍh-ta, Skt. ṭāate. LAv. aoxta with analogical restoration of the t.
/lībṣadya/ ‘to deceive’, *di-(d)bḥ-sa-.
/līdṛža/ ‘to fasten’, *di-dṛgh-sa-; cf. /dṛz-āl ‘shackle’ ls.
/līdṛagža/ ‘to consolidate’, *di-dṛgh-sa- (or /dṛagža/ < *di-dṛgh-sa-).
/līmīgaža/ ‘to present with’, *mi-mng̹h-sa-.
/līaugža/ ‘you said’, *auḍh-sa.

33. Stop + s
33a. Dental + s > *ss > s.
   On aspirates see 32d.
/drugvasu/ < *-vat-su, Lp of /drugvant-/.
33b. $ks > Ȝ$
   On aspirates see 32d.
   `/daiśāl/ 1s sub. s-aor. of dis-, *deik-s-.
   YH `/nāśu/ 'need' Lp of `/nās-/ Skt. naś-.
33c. Labial, velar + $s > + Ȝ$
   See 46.
   On aspirate + $s$ see 32d.
33d. Aspirate + $s$ see 32d.

34. $s +$ stop
   On $s +$ stop see 41, 42.
34a. $sk > s$
   `/nrīsati/ 'to wane', *nṛp-sk-, cf. `/narpiś/ (Note that this $s$ was not changed
   into Ȝ after labial.)
   `/prsa-/ 'to ask', Skt. prṛchāti, *prk-sk.

35. Stop + resonant
35a. $k, ȝ + n > Ȝn$
   `/rāśnaḥaml gen. pl. of /rāzar, rāzan-/ 'pronouncement'.
   Analogically Ȝn appears with $s$ from related forms:
   `/vasna-/ 'will' (uvṛmi etc.).
   `/asnaḥaml if 'heaven', Gp of /asan-/ could also have analogical Ȝn
   (forms with /asan-/ are frequent). But the form might be from 'day', see b.
35b. Av. *zn > Ȝn
   Av. *zn is an Avestan formation. (Av. $z$ originates from ȝ(h), but ȝ(h)n
   became Ȝn. Av. $z$ can also represent PIE $s$, but PIE Ȝn remained Ȝn.)
   `/yasna-/ 'worship' (Skt. yajñā-) must have been formed from yaz-, cf.
   `/yasati/. It could replace an older *yaśna-
   `/asnaḥaml if 'day' Gp, from *azar, Skt. āhar, would belong here too. But
   it could well be from /asan-/ 'heaven', see a.
35c. ki before vowel > *cy > Ȝy (on Ȝ see II 7.)
   `/śyauṇa-/ 'deed', Skt. cyautnā-
   `/śyāta-/ 'happy, Lat. quiētus.
35d. $dn > *nn > n$
   The evidence is not quite certain.
   `/buna-/ 'ground' could be from *budna-, Skt. budhnd-, or from *bundna-
   (Lat. fundus).
   `/sinā-/ 'destruction' has been explained from *sidnā-, root sid- 'to split'.

36. Resonant + stop
36a. On rt. > Ȝ see III 2.
36b. That \( n \theta \) became \( n \) was assumed on the basis of LAv. \( \text{ṇa} \text{ḷ} \text{ṇ} \text{ā} \) Ns beside \( \text{pa} \text{ϑō} \text{G} \) s, but the nominative continues \( *\text{pānt-} \text{aH-s} \), where no \( \theta \) could arise, as against \( *\text{pāt-} \text{H-as} > \text{pa} \text{ϑō} \). The rule is refuted by \( \text{Iṣan} \text{ḥa} \text{ḷ}- \) ‘birth’.

37. The Avestan correspondences of Skt. \( k₃ \), Gr. \( k \) etc.

37a. In cases like Skt. \( \text{ṛkṣa}- \), Gr. \( \text{ārkto} \), the correspondence Skt. \( k₃ \), Gr. \( k \) can go back neither to PIE \( k \) nor to \( k \). Whereas Sanskrit has always \( k₃ \) (with one exception), Greek has \( k \), \( k₇ \) 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 \( x₃ \) and \( ū \) both corresponding to Gr. \( k \), show that the tenuis could be a velar as well as a palatal.

The correspondences are as follows:

\[
\begin{array}{cccc}
\text{PIE} & \text{-k-} & \text{Skt.} & k₃ \ \text{Av.} & x₃ \ \text{Gr.} & k \\
\text{-gwh-} & k₃ & \text{Prkr.} & jhi & g̣ & \text{phth} \\
\text{-k-} & k₃ & ū & k \\
\text{-gh-} & k₃ & j & *̣ & k₇ & \text{khth} \\
\end{array}
\]

On \( ū \) for \( ī \), see II 7.

The Avestan material (LAv. included) mostly adduced is:

\( -k \)  

/\( \text{xšayati} / \) ‘to rule’, /\( \text{xša} \text{bra}- \)/, Skt. \( ks\text{ayati} \), \( ks\text{ātra} \), Gr. \( k\text{táomai} \).

\( -g(w)h- \)

/\( a\text{-gžanvamna}-l \) ‘undiminishing’, Skt. \( ks\text{nute} ? \) (Gr. \( ph\text{thónos} ? ? \)); or with Skt. \( \text{dagh}- \), Gr. \( ph\text{thánō} \).

LAv. \( \text{γžaraiti} ‘to flow’, Skt. \( ks\text{āra} \text{ti} \) (Gr. \( ph\text{theírō} ? ? \)).

\( -k \)

/\( \text{saiti} / \) ‘to dwell’, Skt. \( ks\text{ést} \), Gr. \( k\text{ítzō} \).

LAv. \( \text{aro} \text{ša}- ‘bear’, Skt. \( \text{ṛkṣa}- \), Gr. \( \text{árktos} \).

/\( \text{tāšan}-l ‘shaper’, Skt. \( tāks\text{an}- \), Gr. \( tēktōn \).

/\( \text{rašah}-l ‘damage’, Skt. \( rāks\text{as}- \) (not Gr. \( er\text{ékhθhō} \)).

/\( \text{aši}-l ‘eye’, Skt. \( a\text{kśū} \) (not Gr. \( o\text{phthalmós} \)).

\( -g\text{h} \text{-} \)

/\( \text{zảm} / \) ‘earth’ As, (LAv. \( zā \)), Gr. \( k\text{θhōn} \).

Further have been connected:

LAv. \( \text{sa} \text{ema} - ‘a bird of prey’, Skt. \( \text{śyená} \), Gr. \( i\text{kλños} \).

The last form presents more difficulties than the others. Connection with \( i\text{kλños} \) is not certain. An animal’s name may have been distorted. It will be left out of consideration.

The connection with Gr. \( ph\text{theírō} \) and \( ph\text{thónos} \) are no more than mere possibilities. It is not certain whether these forms had \( g\text{h} \text{w} \) or \( g\text{h} \). Gr. \( er\text{ékhθhō} \) 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. óktalloΣ, optilós.

Zam—‘earth’ has unexpected z for ẑ. Here Sanskrit has gen. sg. jmáḥ (which shows a voiced palatal; the aspiration is lost), where the element corresponding to the s of ks is absent. If jmáḥ represents a simplified *gmes, this form can also be the origin of Av. zm-, which would suppose that the nominative was reshaped after the oblique cases. (Cf. satm < *kmtom < *dkmtom.)

37b. The explanation of these forms is not yet certain. The idea of a separate phoneme (like [8]) after the dorsal is improbable as there is no trace of this sound elsewhere. A unit phoneme like ḳ 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 *dghöm, by Hitt. hartagga /hartka/- if this is cognate with Skt. ṭkṣa-, and perhaps by Gr. phthánō < *dghnuô, if it belongs with Skt. daghnóti ‘to reach’. Thus Skt. jmáḥ could represent *dghmos with simple loss of the dental (and the aspiration). For the shape of roots like *dghelo- cf. *dbheu- in GAv. /dbavaya/- and /dbanz/- < *db[h]engo[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- (áksita-, Pr. ajjhita- with jih < djh, Gr. áphtitós) confirms that it was an aspirate. The Avestan form is found in GAv. dōjīl.arasta- /djīlarta/- ‘who violates Arta’. LAv. lost the d-: jīt. aṣa-. The j (before i) can go back to g, gw, gh or gwh (ẑ, ẑh would have given ẑ). The etymology is evident and everything fits. dōjāmāspa-/djāmāspa/aṣpa/- (L. j-) has the same initial cluster. It has been connected with Skt. kṣamā-, 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):

\[
\begin{align*}
tk(w) & \quad \text{Av. } ^*tk, ^*tc > ^*c \\
dg(w)(h) & \quad ^*dg, ^*dj > j \\
tk & \quad ^*ts? > ^*s \\
dg(h) & \quad ^*dz? > ^*z
\end{align*}
\]

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

One might ask whether ṭkṣa- ‘teacher, teaching’ has such a tk-. The explanation as due to a false division of a form like lanyatkaśa- (L.
anyō_kača-) ‘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 *tc withstand; it is understandable that tk- was preserved longer than tc-.

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 tk- 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)

<table>
<thead>
<tr>
<th>PIE</th>
<th>Gathic</th>
</tr>
</thead>
<tbody>
<tr>
<td>*skwe &gt; sce</td>
<td>ʈ, ʈʃC:</td>
</tr>
<tr>
<td>*sdsn &gt; sn</td>
<td>*kt, ḍd &gt; ŝt, ŝd</td>
</tr>
<tr>
<td>*sn &gt; sn</td>
<td>*kn, ǵn &gt; ŝn</td>
</tr>
<tr>
<td>*sk &gt; s</td>
<td>*ks &gt; ŝ</td>
</tr>
<tr>
<td>*pk &gt; fš</td>
<td></td>
</tr>
</tbody>
</table>

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

From Gathic to PIE

<table>
<thead>
<tr>
<th>Gathic</th>
<th>PIE</th>
</tr>
</thead>
<tbody>
<tr>
<td>sn &lt; *sn</td>
<td>sñ &lt; *kn, ǵn</td>
</tr>
</tbody>
</table>
| *sdsn | *
| *st, zd < *st, sd | ŝt, ŝd < *kt, ḍd |
| *tt, dd | *
| s, z < *k, ǵ | ŝ, ź < *ks (ǵs), ǵhs |
| *sk, ǵ | *
| fš < *ps |
| *pk |
| xs < *kwk | xš < *kwš |

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 sk > s (34a)
2. after a before a stop or n;
3. after dental (ts > s).

s > š 4. after i, u, r, k(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
/ståumіl 'I praise', Skt. stáumi.
/spasya-/ 'to look', Skt. pásyati (with s mobile in Avestan).
/scantyl 3p of *sek[w], /hacatal.
/sásna-/ 'teaching', from sás-/sāh-.
41a sk > s
See 34a.

42. s = s after a before a stop or n
/vástar-/ 'shepherd', Hitt. westara-.
/vástail 'he is dressed', Skt. váste.
/zasta-/ 'hand', Skt. hásta-.

   Before a voiced stop s becomes z:
/nádiśta-/ 'nearest', Skt. nádiśtha-.
/mazda>-l 'wise', *mns-.
/ždil 2s imp. of 'to be', *h₁s-dhi
/dužvacaḥ-/ 'of evil words'.

43. For ts > s see 33a.

44. s > š after i, u, r, k(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.
/iśta-/ superlative ending, Skt. -iśha-.
/dvaiśah-/ 'hatred', Skt. dvēśas-.
/mižda-/ 'prize', Skt. mūdha-, Gr. mīsthós, *mīsthós.
/uṣah-/ 'dawn', Skt. uṣas-.
/duʃ-/ 'bad', Skt. duṣ-.
/rʃua-/ 'high', Skt. rśva-.
/drʃat/ 'boldly', Skt. dhṛṣāt.
  k became x before consonant:
/vaxʃat/ 3s sub. root-aor. 'to grow'.
/uxʃan-/ 'bull', Skt. ukṣan-
  This development did not affect s, z < k, ʃ(h).
/viʃua-/ 'all', Skt. viśva-, *uikuo-
/darsata-/ 'visible', Skt. darṣatā-, *derketo-
/uxmahil/ 'we want', *uk-
/ėsvan-/ 'being lord of', Skt. īśvarā-
  It was not found with s < ts:
/us/ adv. 'up', from', *ut-s, Skt. út.
  Also sī < ū was not affected:
/cisti-/ 'thought, Skt. citti-}, root cit-
  On the other hand it seems that after i < H the development still occurred:
/-iʃ/ of neuters in *-Hs, e.g. /snaṭiʃ/ 'weapon'.
/siʃa-/ if from *kHso-, from the root sās- < *kHs-; the form has alternatively been explained from a root with PIE *i.
  In compounds of which the second element had h- < s- we find ʃ after u. After this ʃ the h of the simplex is reintroduced in the compound: ānū.ḥaxṣ 'ready to help' from ānu and sac-, cf. Skt. ānuṣāk; huṣ.ḥaxā 'good friend'.
  The same restoration is found in Old Persian, uṣḥamaranakara- '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 -ʃ in the first member of compounds (instead of the stem, e.g. L. drux.š. manah-). On the other hand, the h is not always written: huṣaṇa- 'of good gain' (hu- and san-), Skt. susaṇa-, which is /huṣana-/}, not *hu.ḥōna-; L. zantušānō, vīsaptaḥ; also G. duṣḥorābri- 'having bad protection' from *duʃ-srōbri- (not *duṣḥorābri-, cf. L. ḍhrōbra-). 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 > ʃ in -ns after i, u, r
In the acc. pl. of i- and u-stems we find -iʃ, -uʃ, which go back to *-ins, *-uns. Perhaps the vowel was nasalized early, or s became ʃ in spite of the n. The nasalized vowels were long and later lost their nasality.
  In leiždiʃ, leiśmahil from *cins-, nasal present of cīṣ- (cf. /cinas/ 3s), we have the same development.
Neither did n block the influence of an r: /mātrāś/ 'mother' Ap. (The acc. pl. of 'father', /fārah/, shows that the influence of the r dates from after the time when n became a.)

46. s > ʃ after labials and velars
/dibžadyāil 'to deceive', *di-(d)ḇ-sa-, with s voiced according to Bartholomae's Law.
/dafšni(?)-a/-l 'trickable', *dabšs- > *daḇ-, and ŋ > ŋ (cf. zn > sn 35b).
/didr(a)gža/-l 'consolidate', *di-di(n)g̱-sa-.
/-augžal 'you said', *aug̱-sa.
Note that s < k became ʃ after labial (see 32c).
-r- blocked the development in /fsrat-š/.

47. s > h initially, except before a stop or n
Before m the h- disappears.
/habjā/-l 'true', Skt. satyā-.
/hu-l 'good', Skt. su-.
/hīnu/-l 'son', Skt. sūnī-.
/hua-l reflex. pron., Skt. svā-.
/huafna/-l 'sleep', Skt. svāpna-, Lat. somnus.
/mat/-l 'with', Skt. smāt.

48. s > h after a, except before a stop or n
/ahal/ 3s sub. 'to be', Skt. āsat.
/manahil Is of manah- 'thinking'.
/ahu-l 'life', Skt. āsu-.
/dahra/-l 'wise', Skt. dasrā-.
/ahmil 'I am', Skt. āsmi.
/dahyu-l 'land', Skt. āsyu-.
Note. For the writing (based on phonetic realization or later developments) see II 10 and 11. One finds:
for /ahal/: angha anga angha
/ahal/: ang
/ahal: ahu anghu anghu, anghu angh ang
/ahal: ahy ahy (with following accent)

49. s > h after an, am
-ms- became -ns- > -nh-
/sanha/-l 'doctrine', Skt. sāṁs-.
/danhī Gs., dam- 'house'...
A sandhi form is probably preserved in 46.5a adas lā dansi (followed by dṛūḥ).

Note. -anh- is written as -ṅgh-, -anh as -ṅg (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, *h₁, *h₂, *h₃. (H is used when it is not known which laryngeal is concerned or when this is irrelevant. Other symbols used for them 27 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 *h₂, [o] next to *h₃. *H₁ 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 ?.

A survey of the developments is the following (with # for word end, and : for vowel length):

<table>
<thead>
<tr>
<th>H before</th>
<th>V</th>
<th>C</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>#H</td>
<td>?</td>
<td>o</td>
<td>-</td>
</tr>
<tr>
<td>VH</td>
<td>?</td>
<td>V</td>
<td>V:</td>
</tr>
<tr>
<td>CH</td>
<td>o</td>
<td>i</td>
<td>i</td>
</tr>
<tr>
<td>tH</td>
<td>ar</td>
<td>ar</td>
<td>?</td>
</tr>
<tr>
<td>ñH²</td>
<td>am</td>
<td>a</td>
<td>?</td>
</tr>
</tbody>
</table>

1. i before two consonants.
2. ñH 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 ?- in Gathic.

The reduplicated forms rārīṣ(y)a- were trisyllabic, /ra-rīṣ(y)a-/l. This form is not impossible, but it has a strange morphological structure, /ra-/rīṣ-/l. At some time at least it must have been *?ra-?rīṣ-, and this form may well have been preserved in Gathic.
The noun *Nsāyū, Gs yaaṣ had /ṛāyul/ in Gāthic. It seems possible that here /ṛyauṣ/ < *Hyaus was maintained or restored. But if it was restored, it would not prove that ṚC- was regularly retained. Other forms too would present forms with and without laryngeal through ablaut: e.g. /uaxs-, Ṛuxs-/ ‘grew’, 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 ṚC- for Gāthic (or ṚC-).

51.2 ṚV-, 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 Ṛ in Gāthic.

/(uz) Ṛiṛdyāil/, inf. of /ṛar-/ ‘rise’, *h₂er-. The glottal stop was probably also present in the thematized reduplicated present /ṛṝatul/ 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 /ṛap às/ ‘he was’, and ārom /ṛap araml/ ‘I reached’.

Compounds of which the second element began with a laryngeal have hiatus. The evidence for laryngeal is as follows.

/ṛarā-ṛaujahah, ṛatā-ṛuxšayantāḥ/; root *h₂eug- shown by a-vocalism (Lat. augeo) and Greek prothetic vowel (aέκσο < *h₂eug-).

/ḥu-ṛapah-/, ‘of good work’; Lat. opus points to *h₂epos, as neuter stems had e-vocalism.

As PIE had no words with initial vowel *e- or *o-, the words that have initial vowel in the later languages had a laryngeal in PIE. This explains:

/ṛiṭhra-ṛavaham/; etym. uncertain.
/ṛdāma-ṛaspa-, vištā-ṛaspa-/; *h₂ekyos.
/ṛdrša-ṛainaham, ṛarū-ṛainahl/; etym. uncertain.
/ḥu-ṛahavīṛam, parā-ṛahuml/.
/ḥu-ṛita-, hu-ṛiti-/ with zero grade of *h₂ei- ‘to go’; cf. Skt. svūtā-.
/ḥu-ṛarṭi(ṛ)a-l; Skt. sv-ārtha-.
/ḥu-ṛāṭra-/, Ṛvāṛa-.
/ḥu-ṛāṭrayāl.

No evidence for laryngeal can be found for:
/ṛfra-ṛiṣṭākahah, zasta-ṛiṣṭa-/.
/ṛfraša-ṛuṣṭra-/; etym. uncertain.
/ṛvā-ṛiṣṭil/
Uncertain is paityāšām, 53.3c, which seems to have no hiatus; note Y 53.

A problem is presented by:
/fra-µuxtā, hizvā-µuxbāiš, ūma-µuxθaĩš/ which contain the zero grade of vac-, which had no initial laryngeal (as appears from Gr. (w)épos). It must be assumed that Gāthic (or PIE) introduced a glottal stop here.

It is possible, then, that Gāthic 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: 部副 i;
B. in medial syllable: 部副 zero;
C. in initial syllable: 部副 unclear.

A. CHC in final syllables
1 pl. middle ending /-madil/, Skt. -mahi, *medhh₂ (Gr. -metha).
1 du. middle ending /-vadil/, Skt. -vahi, if /dvadil/ 29.5b is correctly taken as 1 du. of dā-.
1 sg. middle ending -i: /auji, manhil/.


Np ending -ani: /sāhvanī, YH /nāmanī/.
/ljani/- (Np /ljanayah/) 'woman' < *gwenh₂- (with original Gs *gwen-eh₂-s, cf. Skt. gnāš, and from which G. /gnā/ is derived).
/*haxtiī 'thigh', shown by Gd /haxti<yāhl/, Skt. sākthi, continues *saktH.

The thematic Is middle ending -ai, which was made with the ending -i, shows that this development must have been of PII date (because /-ail/ 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.

/драuнаh / 'sacrifice', Skt. dvānas, *druHnos.
/mrautul/ imp. pres. 'to say', Skt. brāviti, *mleuH-.
/vrntai/ 'he chooses', Skt. vrñāṭe, *uṇṇHtoī.
/padbiś/ Ip of 'path', Skt. pathibhis, *pntHbhi.
/azūbiś/ Ip of 'bone' < *astHbhi (Skt. asthi < *HastH).
/zanba/ 'birth', cf. Skt. janitram, *guṇH.-
/vanta/ 'praise', cf. Skt. vānītare, *uenH-.
/dudgā/ 'daughter', Skt. duhitā, *dhuγHi̯ṛ. On this form see below.
/astī/ 'guest', Skt. āthinī, *HarH/i̯ṛ(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
/siṣa/-     /dyāt, syaduam; āvadi/  
/piθrai/    /ptā, fθrai/  
/diṣamna-/?

/siṣa/- is the thematic aorist of sāh- 'to teach' (3s /sāṣī/), which agrees with Skt. sīṣa-. It has the zero grade, usual with thematic aorists, of *kHṣ-: *kHṣā-. 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-yāH-.
/sya-dvam/ 2p imp. pres. middle of sā- 'cut down', *sH-ya-.
CHī- always gives Cy- in IIr, cf. Skt. dyāti 'bind', syāti 'bind'. This rule does not apply, however, to /dvādi/ < *dH-vadHH.

diṣamna- has been derived from *dH-sa- (an intensive without reduplication), but this remains uncertain.

LAv. hīta- 'bound' has been connected with /Viṣṭa-ʔaspa/- 'with unbound horses', from *vi-sHtō- (with loss of the laryngeal in internal syllable). But hīta- may have old -i-.
The word for 'father' has the following forms in Avestan:

GAv. /ptā/  LAv. pīta, ptā3
/ptaram/   pītarom
/piθrai/, fθrai/  pītre

NP  patarō /p̥tarō/  
A  faθrō  
D  p̥t̥robyō  
ND  pītaŋ

1. 44.7c  2. 53.4a  3. ptā and some other forms may be loans from Gothic.

It is clear that an older paradigm had forms with i and others without.
The Gothic paradigm suggests that pīta, 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:

\[
\begin{array}{l}
\text{init.} & \text{medial} & \text{final syllable} \\
\text{PIE} & H & H & H \\
\text{PII} & i^1 & H & i^2 \\
\text{Ir.} & i^1 & 0 & i^2 \\
\text{Ind.} & i^1 & a, i^3 & i^2 \\
\end{array}
\]

The word for ‘daughter’ must have had i in the same forms as /ptā/. In *dāugHtar- 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:

1. E.g. in /pīdrail/ (before two consonants); /sīa-/?, sīa-?
2. The i of dūhit- (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.

/pail/ inf. of pā- ‘protect’, *pH-ai. Here the expected f- must have been replaced by p-.

/dadat/ subj. pres. of /dadāmil/, *da-dH-a-t.

/zaya-/ from zā- ‘to win’, *zH-aya-.

/prθu/- ‘broad’, Skt. pṛthū-, *plth-tw-. 
1-θα/ 2pl. primary, Skt. -tha, *thja.
/rəθa-1 (in G. raθi- ‘chariot warrior’), Skt. rāθa-, *roθ̪a-.
/snaθiš/ ‘weapon’, Skt. śnáthi-ti, points to a root *kn̥eH-, of which the
laryngeal was vocalized into i, or before vowel spirantized the t; then both
forms were contaminated.
There is no instance of f < pH.
The stop was retained after s in Iranian:
LAv. hiṣṭa- (G. xša-? see 63.1b), Skt. tiṣṭha- < *st̪θeH-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 dḥ and from *dH, did not become spirants. Therefore it seems better to explain the fricatives as due to the general develop-
ment 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) dḥ < 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 Arme-
nian 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).
/dyâs, dyâl/ 2,3s opt aor. of dâ-, *-ieH-s, -t.
/bûmyâl/ Gs ‘earth’, *-ieH₂s.
1 sg. pres. ind. them. /-al < PIE -oH.

Lubotsky’s Law. Where one expects a long vowel, from short
vowel + laryngeal, followed by a voiced stop, Ilr. often shows a short
vowel... E.g., Skt. ...paj̪ < *peH̪- ‘make-fast’ but pajr̪a- ‘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: \(\text{peh}_{2}g\) = \(\text{peh}_{2}^{'g}\) > \(\text{pa}^{'g}\)-ra- > \(\text{pa}'\text{gra}- = \text{pa'gra}-.\)

In Gathic this accounts for:

\(/\text{bax\r_s}a-/\ 'distribute' from \(\text{*bheh}_{2}g\)-, G. \(\text{baga}-\), beside (analogical) \(\text{baga}-\).

\(/\text{yas}a-/\ 'prayer', Skt. \(\text{yaj\_n\_a-}\) (zero grade in Gr. \(\text{h\_gios, hagn\_os}\)). The present \(\text{lyazatai/}\) was originally probably athematic (see 53.3).

\(/\text{ma\_d}a-/\ 'intoxicating drink' from \(\text{mad}-<\text{*meh}_{2}d\)- (zero grade in Gr. \(\text{mad\_\_o, Lat. mad\_ere}\)); Skt. \(\text{m\_\_a\_\_a\_t\_\_i}\) was probably athematic originally.

\(\text{VHRC},\) and \(-\text{VHR}\), require separate discussion.

The first sequence is found in:

\(/\text{ma\_p\_a}l/\ 'moon', from \(\text{*maH-n-s}\);

\(/\text{u}a\_\_\_\_a-/\ 'wind', from \(\text{h}2\text{ush}_{_q}n\_to-\);

\(/\text{ri\_\_\_r\_\_y\_a}/, \text{r}\_\_\_\_\_\_a-/\).

In these forms the \(\text{r}\) is syllabic, and the syllabic nasal had developed into an \(\text{a}\).

For \(-\text{VHR}\) the regular development is seen in:

1 sg. opt. \(/\text{dy\_\_\_a\_\_m}/\) from \(\text{*dH-iekj}_{-m}\), \(/\text{hy\_\_\_a\_\_m}/\) from \(\text{h}1\text{s-iekj}_{-m}\) (with \(-m\) added). If \(\text{*dy\_\_m}\) were regular, this would certainly have been retained beside 2, 3 sg. \(/\text{dya\_\_h}, \text{dy\_\_l/}\). Therefore, in this case too the resonant was syllabic in Indo-Iranian. This implies that the acc. \(\text{l\_\_m, im}/\) of the \(\text{a}\) and \(\text{r}\)-stems are analogical (after the nom. \(-\text{a}, \text{-i} < \text{-aH, -iH}\)).

Final vocalic \(\text{-r}\) had become \(-\text{ar}:\)

\(/\text{hu\_\_a\_\_r/}\) sun from \(\text{*suHr}\).

53.3 \(\text{VHV, intervocalic laryngeal}\)
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 \(-\text{iHa}, -uHa:-\)

\(/\text{hu\_\_\_\_\_r/}, \text{gen. sg. lu\_\_\_\_a\_\_h/}\) sun, Skt. \(\text{sv\_\_r}\), from \(\text{*suHr, *suH\_h\_s}\).

\(/\text{fr\_\_\_\_\_\_a\_\_l}/\) friendly, Skt. \(\text{priy\_\_r}, *\text{priH\_\_r}\).

\(/\text{zu\_\_\_\_\_\_a\_\_y\_a/}\) call, Skt. \(\text{hu\_\_y\_a}-, *\text{ghuH-eio-}\

\(/\text{du\_\_\_\_\_\_u\_\_a\_\_h}/\) nom. sg. speaking evil invocations.

\(/\text{r\_\_\_\_\_\_\_\_\_\_\_\_jH\_\_\_\_i}\) dat. sg. living rightly;

\(/\text{tu\_\_\_\_\_\_a\_\_m/}\) you, \(\text{*tuH}\) plus a particle \(-\text{am.}\)

\(/\text{mr\_\_\_\_\_\_\_\_\_\_\_\_a/}\) I speak, 1 sg. ind. pres. M.;

\(/\text{su\_\_\_\_\_\_\_\_\_\_\_\_a/}\) to strengthen, inf.
With the suffix -iHä-:
/ʔäviš-ʔä- manifest;
/hu-ʔahav-ʔä- full lifetime.
Gerunds with -iHä-:
/išʔa- strong, healing
/vario-ʔa- desirable
/zähdi-ʔa- risible
/zaviʔa- who must be called.

The gen. du. ending was PII *-Hás:
/ʔahu-ʔäh, manyu-ʔäh, haxti-ʔahl.

There are two nouns in -uH and one in -iH:
As tanuʔam  
G tanuʔah  
D tanuʔai
I  
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 xuʔonat 53.4c, which can hardly have had /huʔan-l/ (note Y 53). aojyaʔisū 46.12b is another problem. It is a gerundive, which should have -iʔa-, but this seems excluded. daidyan 44.10d must come from a root di- as against Skt. dh-. The form nom. pl. -iʔ of the i-stems, where PIE had -ih2-es, must be analogical.

Forms where one might expect -aʔi- appear to have monosyllabic -ai-.

voc. sg. a-stems /bɾx País/. The form, then, does not continue *-eh2-i. It probably has a vocative ending -a (from PIE *-e) with -i (the old nom. ending -ih2 > IIr. -i) added.
nom. du. a-stems /ubai/ both, mostly explained from -eh2-i. It may have had -h2-ei.
nom. sg. f. of pronouns /ʔvai, kvai/, supposed to be *tueh2-i, *ueh2-i.

The evidence for -aʔa- is:
the gen. pl. ending /-aʔam/, on which see below;
the subj. of roots in -a, see below;
the subj. of them. stems, see below;
nouns with the suffix -ah- from roots in -a:
nom.  
acc. daʔah  
gen. daʔak-ah yaʔak-ah  
dat.  
loc. yaʔak-i  

hudaʔäh, duždaʔäh  
hudaʔah-ai
nom. pl.  

huda?ah-ah, duž-

huda?ah-byah

dat.

nouns with a root daʔ-:

acc. sg.  mazdaʔ-am

gen.  mazdaʔ-ah

dat.  mazdaʔ-ai

ins.  ḫadaʔ-ā

loc.  ḫadaʔ-i

nom. pl. zrazdaʔ-ah

In the oblique cases -aʔ- was later introduced; the original ablaut is seen in the inf. /pail/ < *pH-ai.

the suffix -Hon-/Hn- in:

nom. manθraʔā < *mantra-Hā

gen. manθrān-ah < *mantra-Hn-as

dat. -ai < -ai

/θvaʔam/ 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. -h₂ (PII *-i)

acc. -eh₂-m ( *-aʔam)

gen. -h₂-os ( *-as)

This explains:

the instr. sg. */-āl/, from *-h₂-eh₁.

When the nom. was replaced by -aʔ > -ā, the acc. *-aʔam was replaced by -ām. In the nom. pl. */-eh₂-es > *aʔah must have been replaced by -āh. The acc. pl. */-āh/ < *āns replaced -aHns > -aHas.

In the dat. sg. of the ī-stems we have

/vahviāl/ where PIE had -ieh₂-ī or -ieh₂-ai. The dative must have been reshaped after the gen. /vahviāhl/ < -ieh₂-s.

The gen. pl. ending */-aʔam/ has been explained as originated from the ā-stems, where */-h₂-om > *(H)-am was reshaped into -aH-am. However, as the ā-stems nowhere preserve -aʔ- (we would expect acc. *-aʔam, instr. *-aʔā, nom. pl. *-aʔas), the disyllabic genitive ending may rather have originated in the PIE o-stems, where -om was replaced by *(H)om, with the laryngeal to keep the form disyllabic. But the creation of */-aʔam/ 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 -ānaʔam.

The subjunctive of roots in -āl/-aʔ presents:
The subjunctive of thematic stems are given in X 5 (presents and aorists).

The endings we find are the following:

<table>
<thead>
<tr>
<th></th>
<th>active</th>
<th>middle</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sec.</td>
<td>prim.</td>
</tr>
<tr>
<td>ath.</td>
<td>-m</td>
<td>-mi</td>
</tr>
<tr>
<td>them.</td>
<td>-am</td>
<td>-a</td>
</tr>
</tbody>
</table>

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 -a-, with a laryngeal in between on the model of the ath. forms from roots in -āl-ā?, *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:

\[
\begin{array}{c|c|c|c|c}
\text{before} & V & C & V & C \\
\hline
\text{țiH} & ar & ar & (\text{Skt. īr, ur}) & īr, ūr \\
\text{țiH} & an & ā & ( & an & ā)
\end{array}
\]

54.1 \(RHC\), laryngeal after vocalic resonant, before consonant
After -tı, l 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 ə).

*ᵣH-C, ɬH-C
/darga-/ ‘long’, Skt. dīrghā-, *ḍlHghō-.  
/varial/ ‘he chose’, *ulH-to.  
/taruyāya-/ ‘overcome’, Skt. tāruati, *trHuω-.  
/parviya-/ ‘first’, Skt. pūryā-, *prHuio-.  

*nH-C, ṇH-C  
/ustāna-/ ‘stretched out’, Skt. utānā-, from *tnH-no-. This is the only direct evidence in Gathic. In LAv. we have:  
LAv. zāta- ‘born’, Skt. jātā-, *gnH-to-. Indirectly this form is attested in Gathic in /zānta/ 2 pl. imp. pres. of xēnā- ‘get to know’, which has ə from the verbal adjective (*gn-n-H- would have given *zan-).

54.1 RHV, 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.

*ᵣH-V, *ɬH-V  
/parāl/ ‘before’, Skt. purā-, *prH-.  
/parauś/ Gs ‘much, many’, Skt. pūrū-, *plH(o)u-.  
/varu-/ ‘broad’, Skt. uru-, *urHuo-.  
/garāḥ/ Gs ‘song’, Skt. gīrās, *gwrH-.  
*nH-V, *ṇH-V  
/hana-/ them. aor. of han- ‘win’, Skt. sanā-, from *snH-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, *ɬ  
In PIE *r, *ɬ could also occur between consonants, i.e. they could be ‘vocalic’. As there was only one phoneme, there is no need to write ɬ 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 ɬH see 54.  
PfIE *ɬ 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.)
HISTORICAL PHONOLOGY

\[\text{traucah-} /\text{light}, \text{Skt. -roca}-, \text{cf. Gr. leukós.}\]

\[\text{puřra-} /\text{son}, \text{Skt. puto-}.\]

\[\text{rśva-} /\text{high}, \text{Skt. mūcā-}.\]

\[\text{uruṣa-} /\text{to work}, \text{Gr. érgon.}\]

\[\text{pr̥hu-} /\text{broad}, \text{Skt. pr̥hū-}, \text{Gr. plaiús.}\]

61a. \(r\) > \(ar\) before \(ś\)?

In LAv. \(r\) had become \(ar\) before \(ś\), \(z\). It has been assumed that in Gathic this development had taken place only before \(ś\). There are quite a number of forms with \(arś\) in Gathic:

\[\text{darśī-} /\text{sight}, \text{Skt. dafi-}.\]

\[\text{parśa-} /\text{question}, \text{Skt. pṛśhā-}.\]

Uncertain are \(dužvarśa-, \text{dužvarśnah-; arśnavant-}\) will stand for \(*arśnu-\). Before \(ś\) not followed by \(t\), vocalic \(r\) remained:

\[\text{lrśī-} /\text{rightly}, \text{lrśva-} /\text{high}, \text{ldrśi-} /\text{wantonness} \text{Ns}.\]

Also before \(žd\) Gathic has \(r\): \(\text{ldrzdika-} /\text{mercy}, \text{LAv. maraždika-}.\)

But /\(Crś\)i/ is also found:

\[\text{labi-drśa-} /\text{visible}, \text{ldr̥₃au̥ainah-} /\text{bringing visible destruction}.\]

Another instance is \(\text{Iuṛśtar-} /\text{creator}, \text{Skt. Tvāśtar-} ( < *tvarśtar-).\) It is written \(θβ̣oṛ̣śar-,\) which points to \(rø̣ = [r]\) with the first \(r\) coloured by the preceding labial, cf. \(θβ̣arọ̄zḍüm\) for \(I\text{θavṛ̣zḍvam}.\) Only the fact that it is the only form in -\(tar\) with zero grade of the root in Indo-Iranian (even its Sanskrit equivalent \(Tvāśtar-\) has full grade) raises some doubt.

Therefore it is more probable that \(ar\) before \(ś\) is due to influence of LAv. This must certainly be assumed for \(darśaź /\text{ldr̥}_s\text{a}-\text{tā} /\text{boldly}, \text{Skt. dhr̥zḍi, where arŚ < rŚ is found not before ī. The YH has ātārŚ Ns from *ātṛś, whereas Gathic proper has laudṛś, nrś, cikaitṛśi/; it must be a younger form.}\)

61b. \(-Cr\) > \(-Car\)

Neither Sanskrit nor Avestan has a form in \(-Cr\). Skt. yākr̥ beside L. yākara could mean that PIIR. still had -\(r\) (the -\(r\) 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. (-\(rt\) was preserved in Avestan, cf. GAv. /frawrt/.)

Old Persian gives no independent evidence as \(r\) and \(ar\) cannot be distinguished in the script.

Gathic has three neuters in \(-ar\, \text{Irazar, vadar, vazdwar}.\) These neuters had -\(r\) in PIE. First there is hardly any evidence for (PIE) neuters in *-er. Secondly *-er would have become *-ər in PIE. Thirdly it would be very surprising if Avestan had several neuters in the doubtful *-er and none in the well established *-r. Skt. āhar, šuḥحار (and svər) show the same development in Sanskrit.
In the 3 pl. forms /ādar/, /āhar/ the ending was certainly -r (*-er had become *-ēr in PIE, as in the perfect ending). In /cikai-trš/ the -r- was preserved.

YH /ālar/ ‘fire’ voc. probably continues *-tr, cf. acc. sg. /ārm/. 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. (/ārm/ ‘fire’ As., which replaces an old neuter, must have been made when *ār still existed in that form.) There is no indication that -ar was not Gathic. One wonders whether the word was static.

61c. On -rt- > -r- 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 m, n therefore, is not necessary for PIE (but sometimes useful).

In Avestan m and n had become a(m), a(n), so that m and n can only be consonantal. (Thus forms like /mrdyāi, mrdyāil have vocalic r.)

m = m
/monah/- ‘thinking’, Skt. mánas-.
/tamah/- ‘darkness’, Skt. támas-.

n = n
/nabh/- ‘cloud’, Skt. nábhás.
/hvafna/- ‘sleep’, Skt. svápa-.

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 a is improbable). The word is a hapax and the meaning uncertain.

62c. ins, uns > uš, uš
This development is found in the acc. pl. of i- and u-stems, and one other form; see 45.

62d. *n > a; am before resonant and semivowel (before laryngeal see 54).
/dasal/ ‘ten’, Skt. dásā.
/lamāyā/ 3s opt. root aor. of gam- (with analogical j-), Skt. gamyās.

62e. *a > a; an before resonant and semivowel (before laryngeal see 54).
/lādyāi/ inf. of nas- ‘attain’, *h2nk-
/rañal/ n. ‘rest’, < *-mg.
/uañeta/- ‘wind’, Skt. vāta-, *h2uchinto-.
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 : i, 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. citrā-
/-iša-/ superlat. morpheme, Skt. -iṣṭha-, Gr. -istos.
/druxš, druŋ-/ 'lie', Skt. druṅ-.
/puθra-/ 'son', Skt. puṭrā-

Note. On ɾ for i see II 14.8 l, on ɾi for i II 14.8 n, on ɾ for ɾv see II 18 ad 6.
On u appearing as ɾ see II 14.8 m, on av for uv see II 25.3.

631a. ušm- > śm-?
Beside /yušma-/ (in the oblique cases of 'you' (pl.) and /yušmāka-, yušmāvant-) we find /šma-/ etc. The ś- of the latter form presupposes the former presence of a preceding u. Because of /nah, ahma/ from *nas, *nṣma, we expect beside /uḥal/ an original *uṣma-. Therefore *uṣma- must on the one hand have been changed into /yušma-/ after the nom. /yužam/, and on the other hand shortened to /šma-/.

There are two problems. One is whether *uṣma- > śma- 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. /užma-./) 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 *uṣma-, but yuṣma- was shortened, especially in the longer form yuṣmāka-.)

The other problem is the coexistence of the two forms in Gothic. In Gothic we find šma- 20 times (Y 28.10c is a gloss), yuṣma- 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:

<table>
<thead>
<tr>
<th>WestIr.</th>
<th>EastIr.</th>
<th>Sanskrit</th>
</tr>
</thead>
<tbody>
<tr>
<td>OP ?</td>
<td>G. yuṣma-, śma-</td>
<td>yuṣma-</td>
</tr>
<tr>
<td>L. yuṣma-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mod. *śma-</td>
<td>Mod. *śma-</td>
<td></td>
</tr>
</tbody>
</table>
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 Gothic /šmabyal/) may not be a decisive counterargument. There are only nine forms (in the whole LAv. corpus, against 26 forms in Gothic). With two exceptions we find only yušmākem as genitive plural, i.e. closely associated with the nom. yušēm (this gen. pl. is not found in Gothic). Here yu- was protected because it belonged to the paradigm of yušēm. The forms may well be archaisms too, perhaps taken from Gothic texts (of Y 14.1 = Vr 5.1 = Yt 3.1 the first is pseudo-gothic). (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-l would have given a more regular number of syllables, 7-5 instead of 6-5; perhaps yušma- had died out by then.)

631b. hiśC- > xšC-?
The form (GAv. 51.4a and LAv.) xšta- ‘to stand’ is equivalent of (LAv.)
hišta- (PIE *si-sīh2-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
/āyah/ ‘metal’, Skt. āyas-.
/jānayah/ ‘woman’ Np, Skt. jānayah.
/sravah/- ‘reputation’, Skt. srāvas-, OCS slovo.
/gava/i ‘cow’ Ds, Skt. gāve.

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.
/daiwa/- ‘Deva’, Skt. déva-, *deiuos.
/dvaišah/ ‘hatred’, Skt. dvēšas-, *duēsos.
/kaināl/ ‘punishment’, Gr. poinē.
/márkail/ 'death' loc. sg. in *-oi.
/raucah- 'light', *leukos.
/gauša- 'ear', Skt. ghóṣa-, *ghousa-.

In anlaut before r, l the u was consonantal in PIE. The development 
ur- > urv- is post-Gathic, as is shown by the metre. See I 1.4.

When ur- came in anlaut, e.g. through reduplication, it was retained
in Sanskrit. Avestan writes -ao- in such cases.
vaorāzāthā /vaorāzāthal/ < *va-urāz-, 2p sub. pf.

634. *i, *u after consonant before vowel
In general y, v remain in this position. Complications are:
1. *ki > *cy > ʲy, see 35c.
2. *si, *su > hy, hv, see 48.
3. *diu > dvi- see 634a.
4. ku, (k)u > sv, zu (> sp, zb) see 634b.
5. Sievers’ Law 634c.

Note. On θu = [θθ] see II 5.
Note. There is no Gothic evidence for *py > *pu > f.
/svanyah- 'holier', comp. morpheme -yah-, < *-ielos-:
/hatha- 'true', Skt. satya-.
/harvalat- 'health', Skt. sávra-.
/svanvant- 'bringing good fortune'.
634a. *diu > dvi
For *duelo > dua cf.
/duašah- 'hatred', Skt. duśas-.
/duaša- 'distress'.
/-dvi/ 2p Med., Skt. -dhwam.

For *dui > dvi cf.
/dbišya- 'to hate', /dbišvant- 'inimical', Skt. dvish-.
/dbišāyam/ 'for the second time', Skt. dviiṣya-.

That this development was already Gothic may be shown by the dif-
fERENCE with LAv. We find the notations
G. daibi- : L. źbi-, bi-

This shows that in LAv. the dental was pronounced very slightly and
soon lost, whereas it was known that Gothic required a full dental stop,
a sequence which one could only pronounce by inserting a vowel (which
even got epenthesis); daibi- will represent [dʰbi] as realization of /dbi/-.
This situation can hardly have arisen if Gothic still had *dvi-.

634b. *ku, (k)u > sv, zu (> sp, zb?)
Our text has in all cases sp; zb; e.g.
aspā- 'mare', Skt. áśvā-
viṣpa- 'all', Skt. viśva-.
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. īśvarā-) is written with sv, but it could have analogically restored su. As the only evidence we have is that the development was much later, we shall accept that Gathic still had sv, sv. The change is not PIr., as OP has s < kṣ.

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: l-byah, -dyail, comp. l-ya-l, pres. l-ya-l, fut. l-sya-l; endings l-dvam, -dvail and imp. l-hua, -sva, -sva/, nominal l-va-, -vant-l, pf. etc. l-va-l. 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-]:

<table>
<thead>
<tr>
<th>Sievers’ condition</th>
<th>no Sievers’ condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>/dafsńia-/ 52.8a</td>
<td>/āviśiʔa-/ 31.13a, 50.5c</td>
</tr>
<tr>
<td>/śanńia-/ 31.10b, 49.9a</td>
<td>/huʔahaviʔam/ 53.1c</td>
</tr>
<tr>
<td>/huparśia-/ 28.10c</td>
<td>/manahim/ 53.6d (?)</td>
</tr>
<tr>
<td>/iśāśaśria-/ 29.9b</td>
<td>uncertain:</td>
</tr>
<tr>
<td>/jīvia-/ 32.7b</td>
<td>/urzanya-/ or /urzaniʔa-/ 33.3a</td>
</tr>
<tr>
<td>/naptia-/ 46.12a</td>
<td></td>
</tr>
<tr>
<td>/parvia-/ 26 times</td>
<td></td>
</tr>
<tr>
<td>/aparvim/ 28.3a</td>
<td></td>
</tr>
<tr>
<td>/staumia-/ 33.8b</td>
<td></td>
</tr>
<tr>
<td>/vaipia-/ 51.12a</td>
<td></td>
</tr>
<tr>
<td>/vantia-/ 28.10c</td>
<td></td>
</tr>
<tr>
<td>/(a)vāstria-/ 10 times</td>
<td></td>
</tr>
<tr>
<td>/yasnia-/ 30.1b</td>
<td></td>
</tr>
<tr>
<td>/zaviśtia-/ 3 times</td>
<td>but</td>
</tr>
<tr>
<td>/sardya-/ 33.9a</td>
<td></td>
</tr>
<tr>
<td>/xṛūnya-/ 46.5c, (if ā, not u)</td>
<td></td>
</tr>
</tbody>
</table>

Note that /manahiam/ 53.6d stands in a line that presents difficulties.

As we must assume a suffix -iʔa- < *-iHə- 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 -iʔa-, the two exceptions to Sievers’ Law (/sardya-, xṛūnya-/l) can also be explained: they (alone) contain simple -ya- < *-i̯a-. But this does not seem a probable conclusion.
The nouns with -i-/yi- present two relevant forms:
/vahviä/- fem. of vahu- 33.12b, 48.5b, 51.10c, 17b, 53.4d
but
/bümäyh/ 32.3c
(unless 32.3c is to be read /yäis [a]sru(ê)dvam bümääh haptabai/).
Note that one is a substantive, the other an adjective. /vahviä/- must be
due to Sievers' Law. Cf. RVداف/a/.

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 /vahviä/- 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, /l|l/ and /yl/, and /ul/
and /vl/.

7. The PIE vowels *ë, *o and *ë, *ö.

71 The PIE vowels fell together in a and ã respectively. This must have
happened after *k(w), g(w) became c, j before *e, *ë.
For a = h2e and ã = e2ã se 5.
On Brugmann's Law see 71a.
On the diphthongs *ei, *oi etc. see 633.
/Cal/ 'and', Skt. ca, *kwæ.
/manah/- 'mind', Skt. mänas-, Gr. ménos, *ménos.
/darsata/- 'visible', Skt. darsatä-, Gr. -dérketo-, *derketos.
/lfrä/, Skt. prä, *pro.
/garma/- 'heat', Skt. gharma-, *ghoromoro-.
/nal 'man', Skt. nā, Gr. anér, *h2nær.
/brätä/ 'brother', Skt. bhätä, Lat. frater, *bhréh2leri.
/äsū-/ 'quickly', Skt. āśū-, Gr. ἀκός.
/dätä/ 'giver', Gr. dōtēr.
/-ül/ abl. sg. ending of the o-stems, *-ōl.

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 /däraya-, mänya-/ etc.
from *moneie- etc. The long vowel spread to roots ending in other
consonants than r, l, m, n, e.g. /rähaya-, räsaya-/], 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 /strāvil/ but /mravil/ < *mrauHi.

The third category are the accusatives type /dālāram, ruśānam/ from *-or-m etc.

An isolated form is /lāyu/ ‘time of life’, *h2ōiu.

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

/ā-āl/ is found in the dat. sg. of o-stems, but we have /āl/ in Ns /huśaxāl/ < *sokwHōi and in the loc. sg. of i-stems, /vidātāl/ ‘distribution’. The situation in Sanskrit is the same (cf. sākhā, śucā), 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.

/āw/ 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, sahvar/, but we have /āl/ in nom. sg. /dugdā, dāl/. The loss of the -r is only IIr. In the neuters the -r must have been restored after the singular (/ayār; *sahvar/).

/ān/ is found in the ntr. pl. /dāmām, rāmām/ (with -n assimilated to preceding m), and in the loc. sg., /caśmām/, but -ā in the nom. sg. /kārpā, taśāl/. Again the -n must have been restored.

82. Final consonants

821. *-t

821a. velar + *l

For yaogat 3s aor. and paityaogat adv. (?) it has been assumed that -gat denotes -k; but there is nothing comparable in the Avestan writing system. In the verb one might expect *yauk-t > *yaukt. A -t was lost, and mostly restored, after s, so probably it was lost and restored here too. The -t was pronounced weakly (written -l), 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 [diyeget].) The -t in the adverb (also -L. hawzayaogat, ašī. hāget, ārmaitīs. hāgat) is morphologically difficult (-t analogical after /hakrt/, Skt. sakři?).
821b. dental + *t > -st; see on *-st below.

*st, -št > -st, -š.

In many cases the -t has been restored. The situation is not quite clear. We have the following forms (all 3s):

\begin{align*}
\text{/aʔas/} & \text{ ind. imf. ah-} & \text{/tāšl/} & \text{ inj. pres. taš-} \\
\text{/didansl/} & \text{ inj. pres. darh-} & \text{49.9b} & \text{/ruraul/} & \text{ inj. pres. rud-} \\
\text{/cinas/} & \text{ inj. pres. ciš-} & \text{44.6d} & \text{/daidaišl/} & \text{ inj. pres. intens. dis-} \\
\text{/cinas/} & \text{ inj. pres. ciθ-} & \text{32.5c} & \text{/caišl/} & \text{ root aor. ciš-} \\
\text{/vānsl/} & \text{ s-aor. van-} & \text{33.5} & \text{/maist/} & \text{ root aor. miθ-} \\
\text{/sānsl/} & \text{ s-aor. sand-} & \text{49.2c} & \text{/vaxšl/} & \text{ root aor. uxš-} \\
\text{/xšnaušl/} & \text{ s-aor. šnu-} & \text{43.13d} & \text{dārašl/} & \text{49.2c} \\
\end{align*}

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 dārašl and dārašl cannot be s-aorists (from dar-). dārašl has also been derived from drš- 'to dare', as a root aorist, so /daršl/ (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 /aʔasl/, /didansl/ and /cinasl/. 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.) Lasl may be an exception because of its frequency. (LAv. provides only one relevant form, naist.) The problem is unsolved. (Perhaps the -t was restored later, but inconsistently.)

821c. *-nt is found in /cart/ 'he made'; the -t may-have been restored; cf. section 821a.

821d. *-nt > -n

\begin{align*}
\text{/dadon, dān/} & \text{ 3p inj. pres., aor. of dā-} \\
\text{/raišvanl/} & \text{ pres. ptc. ntr.} \\
\text{/miždavān/} & \text{ Apn 'rewarded'; adj. in -vant-.} \\
\end{align*}

822. *s

-Y<s: *-as, *-ās > -ah, -āh

-Cs: velar + s > -xš

dental + s > -s

-ans > -anh, see 49.

-ins, -uns > -iš, -uš, sec 45.

The Gathic forms in -xš are: /druxš, usixš, vaxš, ānušaxš/; in Sanskrit the -s was lost: drik, ušik, vák, ānušak.

For -ts > -s compare /harvatāst, /ušpāhišsl/ < *-nts 'all observing'.

Note also *-ants > -ans: pres. ptc. /prsans, jivansl/. The forms seem to have been restored, in view of LAv. -o < *-as < *-nts.
823. *-H. See on the laryngeals.

824. *-r, -l, -m, -n see above 81b under the diphthongs.
   *-Gr > -Car see 61b.
   *-n is assimilated to the m at the beginning of the syllable: loc. sg.
   /canismâm/, ntr. pl. /damam/.

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.
/kanrista/- 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 *h₁essi > *h₂esi, which became
/ahili/ in Gāthic.

Reduction of two sibilants to a single one:
/dusiti/- 'distress' < *duš-štiti-, cf. /hušiti/- 'good dwelling'.

/dusrör/- 'having bad protection' < duš-srör- (from *srörə-, L. harrörə-).

93. Haplology

Beside /amrtaāt/- we find the shortened form /amrāt/-.
Beside /harvataāh/ we find /harvatah/ (perhaps to be read /harvātəh/), which is perhaps due
to influence of /amrəl(at)āt-/, because the two forms often occur together.
Beside /harvās/ also /harvās/ occurs.
Comparten 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
/ad近视-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
/daiwa-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.
/luslana-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
/ad近视-arta/ 53.6d.9b 'destroying Arta'.
/frādat-gaiha/ 33.11b 'furthering life'.
/Haisat-aspa/ 46.15a 'descendant of H.', litt. 'bathing horses'.
/ljanar/ 53.8c 'men-killing', < *jan-nar-.
/manza-rayi/ 43.12d 'granting wealth'.
/!Zaraθ-uštra/ 28.6b etc. pers. name; '...-ing camels'?
12. 1m = preverb
/ifra-divā/ 32.14b 'long since', Skt. prādīvah, -i.
/paṇi-gaiha/ 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’.

da-: /zraz-da?-l ‘believing’, Skt. śrad-dhā.-

gan-: /sar-gan-/? 29.3a is quite uncertain;

/jrām-gan/- ‘who smashes the obstacle’.

jī-: /rāj-jī?-l ‘living justly’.


Suffix -a-

dviš-: /a-dvaiša/- ‘not hostile’ (perhaps /-dvaišah-/).

/hi-dvaiša/- ‘enemy’.

han-: /hu-šana/- ‘giving good gain’.

zuš-: /ha-zaoša/- ‘like minded’, Skt. sajōsa-.

Two superlatives are supposed to derive from a-stems:

bar-: /abi-bariha/- ‘best bringing food’.

da-: /zraz-dišta/- ‘most believing’ (from *-dH-a-?).

Suffix -ti-

ar-: /fra-rti/- ‘arising, coming up’.

citi-: /hu-cisti/- ‘good understanding’.

da-: /vi-dāti/- ‘distribution’.

da-: /zraz-dāti/- ‘belief’.

dis-: /a-dišti/- ‘instruction’.

i-: /an-iti/- ‘lack of freedom of movement, no access’;

/duś-iti/- ‘misery, strife’;

/hu-iti/- ‘easy access’;

/vasah-itil/ ‘liberty’.

ji?-: /hu-jīti/- ‘good life’;

/a-jyāti/- ‘non-life’;

/duž-jyāli/- ‘painful life’;

/hu-jyāti/- ‘health’;

/fra-jyūti/- ‘possibility in life, future’.

kr-: /a-krti/- ‘formation, existence’;

/ranyas-krti/- ‘bringing joy’.

man-: /tarah-mati/- ‘insolence’;

/tusmā-mati/- ‘silent thought’?, ‘the meditative one’?

mr-: /hu-mrti/- ‘good remembrance’ (?One would expect *huśmṛti-; so rather ‘good death’?)

pat-: /ava-pasti/- ‘falling down’.
prs-: /ham-p(a)rsti-/ ‘consulting, counsel’.
sac-: /ā-skṭi-/ ‘communication, following’.
sas-: /duṣ-sasti-/ ‘teacher of evil’;
    /fra-sasti-/ ‘fame’.
sru-: /a-sruṣṭi-/ ‘disobedience’.
si-: /hu-siṭi-/ ‘good dwelling’.
uc/vac-: /vṛāx-uṭti-/ ‘joyful crying’?, ‘habit of pleasure’?
vid-: /a-visti-/ ‘poverty, lack’.
zu-: /ā-zuti-/ ‘libation of fat’, Skt. ā-huti-.
Unclear is paityāṭi-.
Suffix -ia-
dā-: /ni-dāta-/ ‘laid down’.
drs-: /abi-drsta-/ ‘visible’.
iš-: /fra-piṣṭa-/ ‘stimulated’.
    /iszāṭa-piṣṭa-/ ‘what is set in motion by hand’?
kr-: /han-kṛta-/ ‘made ready’
    /hu-kṛta-/ ‘well made’.
mr-: /a-mṛtā(-tā)-/ ‘immortality’.
vrz-: /duṣ-v(a)rṣṭa-/ ‘evil deed’;
    /hu-v(a)rṣṭa-/ ‘good action’;
    /haṭya-v(a)rṣṭa-/ ‘realization’.
zu-: /daiva-zuṣṭa-/ ‘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. okas-.
da-: /yaust-dah-ah- / ‘making healthy’;
    /duṣ-dah-ah- / ‘acting wrongly, maleficent’;
    /hu-dah-ah- / ‘beneficent’.
vac-: /rṣ-vacah-/ ‘true-speaking’.
zu-: /duṣ-zuṇah-/ ‘speaking evil’.
Other suffixes
-ana-: xṇā-: /fra-xṇana-/ ‘discernment’? Uncertain.
-āni-: caṃ-: /varu-caṣāni-/ ‘farseeing’.
    mar-: /hāta-marāṇi-/ ?
-in-: xṇā-: /fra-xṇina-/ ‘careful’.
-tar-: daxṣ-: /fra-daxṣṭar-/ ‘revealcer’.
    mid-: /hamaistār-/ ‘suppressor’ or ‘expeller’.
-θman-: ṣi-: /hu-ṣaiθman-/ ‘good dwelling’.
Participle as 2m.
/la-drjugant-/ ‘not deceitful’.
/vispā-hiṣat-/* ‘all-observing’.
/ārta-uṣṭayant-/* ‘increasing Arta’.
/a-gāṇuṇama-/* ‘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-uṣṭa/* 47.2b, 51.3b ‘word spoken with the tongue’. The first
member cannot be a normal instrumental, which would be hizvā. It
might be the stem. Or expected *hizū-uṣṭāś (pronounced [-uu-]?, writ-
ten -u(u)u-?) was no longer understood and changed after the post-
Gathic instr. hizvā. In 51 the two members are separated by the caesura,
so they were probably two words. Perhaps the instrumental had the form
*-veha-h₁.

Adjective as first member
In most cases the manuscripts give two words.
/ahma-rūṭi/* 29.11c ‘our gift’.
/darga-jvāṭi/* 33.5b, 43.2b ‘long life’.
/hada-vasti/* 46.17c ‘total inspiration’? (root vat-).
/hābra-manah/* 30.9c ‘convinced’? Doubtful.
/maiṭa-maya/* 33.9b ‘consisting of change’? Doubtful.
/mana-vista/* 46.19d ‘my possession’?
/θva-ṭi/* 44.10c ‘thy power(s)?’
/xṣma-uṣṭa/* 43.11c ‘your word’.

Preverb as first member
/lava-hāna/* 33.5a ‘stop(ping)’; Skt. ava-rānā.-
/?ā-mañah/* 49.6b ‘intention’.
/lā-varna/* 30.2b ‘choice’.
/lānu-śak/* 31.12c ‘in due course’; Skt. ānušāk ‘in turn’.
/parā-paḥu/* 46.19c ‘of future life’.

Adverb as first member
/lan-aṣṭaman/* 46.17b ‘non-verse’.
/la-vaṭriya/* 31.10c ‘non-pastor’.
/duḥ-harba/* 31.20b, 53.6c ‘bad food’.
/hu-paḥahipa/* 53.1c ‘good existence’.
/hu-nara/* 43.5c ‘ability, power’; Skt. sūnāra-.
/hu-nartṭā/* 50.8d ‘ability’.
/hau-zanṭha/* 45.9e ‘good relationship’.
/aram-pibua/* 44.5d ‘(after)noon’, litt. ‘(time) fitting for the meal’
/rā-uxṭa/* 31.19b, 44.19c ‘true word’.
23. Determinatives with an adjective as second member.
Substantive as first member
/lártu-avajah/- 43.4d 'strong through Arta'.

Adjective as first member (This type does not exist in Sanskrit.)
/vispa-mazisla/- 33.5a 'greatest of all'.

Adverb as first member
/la-dátha/- 46.15b.17d 'unrighteous'.
/an-aiša/- 29.9a, 46.2a 'powerless'.
/hu-manzaI- 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-dársa/- 43.16d 'sunlike'.
/Madzai-máha/- 51.19a personal name. Lit. 'from the middle of the month'; 'relatif au mois dans son milieu'.
/iša-xafrī(?)a-/ 29.9b 'ruling with power'.
Adjective as first member
Verbal adjectives in -ta-, -na-
/adšta-ainah/- 34.4c 'bringing visible destruction'.
/píta-tanu?-/ 53.9b 'whose body is forfeited'.
/Višta-paspa/- 28.7b etc. personal name; litt. 'having loosened? horses'.
/ustána-zasta/- 28.1a, 50.8b 'with outstretched hands'.

Other adjectives
/idargayu/- 28.6a 'lasting a long time'.
/tkama-fstu/- 46.2b 'having few cattle'.
/tkamnânar/- 46.2b 'having few men'.
/mítah-vacah/- 31.12a 'whose words are false'.
/yá-fyaubña/- 31.16c 'with which actions'.
/žara-usta/- 28.6b etc. pers. name; 'with ... camels'? Preverb as first member
/tpari-gaItha/- 34.2c 'universal', litt. 'around the creatures'? Adverb as first member
/duštri/- 49.1b 'having bad protection'.
/duš-xafrīa/- 48.5a.10d, 49.11a 'ruling badly'.
/duš-fyaunha/- 31.15b etc. 'of evil deeds'.
/duš-xratu/- 49.4a 'of bad intention'.
/duš-dayana/- 49.11b 'of evil thinking'.
/duš-manah/- 49.11b 'of evil mind'.
/duš-vacah/- 49.11a 'of evil words'.

/duž-varna-/ 53.9a 'choosing badly'.
/hu-dānu-/ 31.16a 'blessed'; Skt. sudānu-.
/hu-ṛyaudha-/ 45.4d 'doing good'.
/hu-xratu-/ 34.10a, 51.5b 'of good will'.
/hu-xṛaṭra-/ 44.20a etc. 'well-ruling'.
/hu-zantu-/ 43.3e etc. 'of good lineage'.
/hu-pāpah-/ 44.5b.c 'craftsman'.
/hau-guva-/ 46.16b etc. pers. name, litt. 'having good cattle'.
/vasas-xṛaṭra-/ 43.8d 'ruling at will'.

CHAPTER SIX

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:

<table>
<thead>
<tr>
<th>sg. nom.</th>
<th>pl.</th>
<th>n.v.</th>
<th>du.</th>
<th>n.v.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>voc.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>acc.</td>
<td>acc.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>gen.</td>
<td>gen.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>abl.</td>
<td>a.d.</td>
<td></td>
<td></td>
<td>a.d.i.</td>
</tr>
<tr>
<td>dat.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>instr.</td>
<td>instr.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>loc.</td>
<td>loc.</td>
<td></td>
<td></td>
<td>loc.</td>
</tr>
</tbody>
</table>

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
  -i 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. \( CeC-u-s \)  
\( CeC-u-m \)  
\( CC-ou-s \)  
\( CC-ou-(e) \)  
\( CC-ou-(eh) \)  
\( CC-\tilde{e}u \)  
\( CeC-ou-es \)  
\( CeC-u-ns \)  
\( CC-ou-om \)  
\( CC-u-bhi \)  

hyst. \( CeC-u-s, \ -\phi u(-s) \)  
\( CC-eu-m \)  
\( CC-u-os \)  
\( CC-u-ei \)  
\( CC-u-eh \)  
\( CC-eu(-i) \)  
\( CeC-eu-es \)  
\( CC-eu-ns \)  
\( CC-eu-om \)  
\( CC-u-bhi \)  

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. \( h2oi-u \) /\( \ddot{a}yu \) /  
\( h2i-eu-s \) /\( yau\ddot{s} \) /  
\( h2i-eu-\ddot{e}i \) /\( yau\ddot{a}l \) /  

hyst. *\( pont-\ddot{e}h(-s) \)  
*\( pont-eh\ddot{i}-m \)  
*\( pnt-h\ddot{i}-os \)  

LAv. \( pani\ddot{a} \)  
LAv. \( pani\ddot{am} \)  
/\( p\ddot{a}b\ddot{a}h \) /

The static inflection had the accent on the root throughout, and zero grade of suffix and ending. Thus:

nom. \( C\ddot{e}C-r \)  
acc. \( C\ddot{e}C-r-m \)  
gen. \( C\ddot{e}C-r-s \), 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.

<table>
<thead>
<tr>
<th>sg. nom.</th>
<th>Skt.</th>
<th>GAv.</th>
<th>written</th>
</tr>
</thead>
<tbody>
<tr>
<td>-s, -o</td>
<td>-s, -o</td>
<td>-s, -o</td>
<td></td>
</tr>
<tr>
<td>acc.</td>
<td>( V ) -m</td>
<td>-m</td>
<td>-m</td>
</tr>
<tr>
<td></td>
<td>( C ) -am</td>
<td>-( am )</td>
<td>-( \ddot{\jmath}m )</td>
</tr>
</tbody>
</table>
### Singular

In the endings as such there are no peculiarities. Details are discussed in the relevant sections.

### Plural

**Gen.** On /-aðaml/ see IV 53.3.

**Instr.** The ending is always written with long ḷ, 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.** -ā (written -ā) occurs only once (*vānāh 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

---

1 Type devī
consonant-stem ending -i can be inferred from asibyā, which must have -i- from the nom. du.

Gen. The Avestan form -āh < *-ās can correspond with OP gausāyā, usiyyā. 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. bruvai-byam 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. f-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.

<table>
<thead>
<tr>
<th>masc.</th>
<th>fem.</th>
<th>ntr.</th>
<th>adj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>kl/vāc- voice</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>glj usij- priest</td>
<td>buj-</td>
<td>YH ast bone</td>
<td>ānuśac- standing after</td>
</tr>
<tr>
<td>t</td>
<td>ānuśac- standing after</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d ānuśac- standing after</td>
<td>vajubrī- woeful</td>
<td></td>
<td></td>
</tr>
<tr>
<td>p</td>
<td>ap- water</td>
<td>YH arlahāc- companion of Ar</td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>YH nās- obtaining</td>
<td>YH suc- shining</td>
<td></td>
</tr>
<tr>
<td>z</td>
<td>varz- invigoration</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>drz- shackle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### The Noun

<table>
<thead>
<tr>
<th>Noun</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>iš</td>
<td>strength</td>
</tr>
<tr>
<td>aš</td>
<td>eye</td>
</tr>
<tr>
<td>ahumbiš</td>
<td>world-healer</td>
</tr>
<tr>
<td>drš</td>
<td>outrage</td>
</tr>
<tr>
<td>yauš</td>
<td>life</td>
</tr>
<tr>
<td>ŏh</td>
<td>mouth</td>
</tr>
<tr>
<td>m dam</td>
<td>house</td>
</tr>
<tr>
<td>zam</td>
<td>earth</td>
</tr>
<tr>
<td>zyam</td>
<td>winter</td>
</tr>
<tr>
<td>n</td>
<td></td>
</tr>
<tr>
<td>r</td>
<td>gar</td>
</tr>
<tr>
<td>sar</td>
<td>union</td>
</tr>
<tr>
<td>aďa</td>
<td>oblation</td>
</tr>
<tr>
<td>i?</td>
<td></td>
</tr>
<tr>
<td>u?</td>
<td></td>
</tr>
<tr>
<td>v</td>
<td>gau</td>
</tr>
</tbody>
</table>

The inflection of the root nouns:

- stops, spirants: -r, -n, -m, -h
- Ns: vāxs, druxš, drš-ca1 sarja
- A: vācam, drujam, kōpam saram zam
- G: frādah, drujah sarah, garah zimah, danh ŏh-ah
- D: sucā, spredā, drzā sarai, garai
- I: varzi sari YH ŏh-a2
t
- V: ahumbiš dām
- Np: īšah
- A: āpah, apas-ca
- G: kōpam YH, stutam
- D: vijbyah, rayubrdbyah
t
- I: azdbiš YH garbiš
- L: nāšu YH
- D: ašbya

1. -z + s > š see IV 33b
2. written Šāghā
3. written vijbyā
4. -s + s > š see IV 33b
THE NOUN 115

-N
N maza?ah, -ah-ca
A maz charismatic
G maza?ah, -ah-ca, cagd-ah?
D maza?ai
I ãd-a?-ã
L ãd-a?-
V mazdã, ãdã

pl. N zrazda?-ah
A vyada?-ah YH yavaiji?ah, -su?ah gãh YH
L adãhu YH
du. N gavã

1) written âdãi, with unoriginal -ãi?

Stems in stops and spirants. The du. dat. /ãšbyãl/ must have its -i- from the du. nom. *aãi.

Stems in -m. The As /zãml/ has been created on the basis of Ns (LAv. ţã < ) *zãh. This word was originally a derivative (*dãgãh-ãm, cf. Hitt. tãkan), but when ãgãh- had become z- (Skt. ks-), it looked like a root noun and took -s in the Ns.

While /dãnhl < *dãn-s is proterodynamic, /zim-ãhl/ from zyam- is hysterodynamic.

Stems in -a?. For the laryngeals see IV 53.3. /maza?, âda?-/ have -ã- generalized; zero grade is found in the infinitive, originally dative, /pãl < *pH-ãi, and in /cagd-ãhl/ if this really was a stem in -ã?

Stems in -u. /gãml, Skt. gãm, Gr. bõn must be of PIE date, from *gwaem. Gen. /gaušl < *gwaH-ou-s. The Ap /gãhl/ 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 paθ- ‘path’ (LAv. forms in brackets).

GAv. Skt. PIE
Ns (maza) mahãn megh-h2
A (mazãntem) mahãm mg-eh2-m
G mazãh mahãh mg-h2-õs
D mazai mahã megh-h2-ãi
Ip mazbiš mg-h2-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.).

<table>
<thead>
<tr>
<th>Neuters</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>daʔah- gift</td>
<td>hudaʔah- benificient</td>
</tr>
<tr>
<td>yaʔah- prayer</td>
<td>duždaʔah- maleficent</td>
</tr>
<tr>
<td>nabah- cloud</td>
<td>miθahvacah- whose words are false</td>
</tr>
<tr>
<td>vacah- word</td>
<td>ršvacah- true-speaking</td>
</tr>
<tr>
<td>varcah- reputation</td>
<td>dužvacah- of evil words</td>
</tr>
<tr>
<td>raucah- light</td>
<td>anaucah- inimical</td>
</tr>
<tr>
<td>raðah- gracious disposition</td>
<td>vazdah- inalterable</td>
</tr>
<tr>
<td>vrādah- joy, bliss</td>
<td>aujah- strong</td>
</tr>
<tr>
<td>cazdah-(vant-) (prudent)</td>
<td>ṭartʔaujah- strong through Arta</td>
</tr>
<tr>
<td>aughah- strength</td>
<td>dužmanah- of evil thinking</td>
</tr>
<tr>
<td>ṭyajah- loneliness</td>
<td>ahmarafnah- YH having support from us</td>
</tr>
<tr>
<td>namah- worship</td>
<td>drštahainah- bringing visible destruction</td>
</tr>
<tr>
<td>tamah- darkness</td>
<td>ārtacinhah- YH loving Arta</td>
</tr>
<tr>
<td>manah- mind</td>
<td>hvarnah- majestic</td>
</tr>
<tr>
<td>rafnah- support</td>
<td>dužvarfnah- of evil actions</td>
</tr>
<tr>
<td>aĩnah- sin</td>
<td>hvarapah- of good works</td>
</tr>
<tr>
<td>draunah- sacrifice</td>
<td>vasah- wishing</td>
</tr>
<tr>
<td>raixnah- heritage</td>
<td>miθah-(vacah- whose words are) false</td>
</tr>
<tr>
<td>yasah-(ya- to give) prestige</td>
<td>caguhah- giving help</td>
</tr>
<tr>
<td>raʃah- damage</td>
<td>gaudayah- tending cattle</td>
</tr>
<tr>
<td>vaʃah- decay</td>
<td>drigudayah- YH caring for the poor</td>
</tr>
<tr>
<td>dvaišah- hatred</td>
<td>nādyah- weaker</td>
</tr>
</tbody>
</table>
The noun

ausah- destruction
bqvaxšah- zeal
awah- help
sravah- word, teaching
savah- strength
zavah- strength
ayah- metal, iron
cayah- regard
hazah- power, violence
dbanzah- fullness
Words in -iš, -uš: neuters
rajis- (?arj-?) darkness
narpis- reduction
snašis- weapon
taviš- violence
Masculine and feminine:
maasha- m. ‘month
ušah- f. dawn

The (perfect) participles in -vah- are given with the verb.

The inflection of the s-stems

neuters

NAs  manah, -as-ca  da?ah              da?ah
      narpiš, āzuš
G    manah-ah, -as-ca  da?ah-ah
D    ainah-ai
I    manah-ā
L    manah-i-ca  ya?ah-i
NAp   manāh
G    ainah-a?am  ya?ah-a?am YH
I    raucah-biš

adjectives

Ns   vasah
     huda?ah, n. gaudāyah
A    drsta?ainah-ām
     huda?ah-ai
G    ārta?aujah-ah
     huda?ah-ai
D
I    vazdah-ā?
Np   dužu(a)ršnah-ah  huda?ah-āh
A    dužvacah-ah
     huda?ah-byah
D    anaucah-ā

comparatives

svanyāh, n. vahyah
nadyāh-am, n. vahyah
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 /manah/ < *-ōs; Skt. mānāṃsi contains -asi < *-es-h₂ contaminated with -ās < *ōs; cf. §25.

/raucabhiš/ is written raoc̣bhiš, see II 14.8k.

The word for ‘moon’ has the old nom. sg. with zero grade of the suffix, *meh₁n-s > /ma?ah/. (The acc. was originally *meh₁-n-es-m, but here too the zero grade was introduced, Skt. māsam.)

/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 carat- runner (?)
amrt(at)āt- immortality
harv(at)-āt- health
parvatāt- eminence
avaitāt- lament, woe
hvaitāt- YH family-relationship
kavītāt- kavi-hood
astantāt- YH corporality
hanartāt- capacity, skill

nt-stems

adjectives

hambavant- YH uniting themselves yuśmāvant- like you (pl.)
mīḍdavant- rewarded θuavant- like you (sg.)
mavant- like me drugvant- belonging to the drug
amavant- powerful raucahvant- YH radiating light
vāstravant- having meadows cazdahvant- responsible
zāstāvant- with the hand aujahvant- ‘strong
šmāvant- like you (pl.) namahvant- adoring
The participles are given with the verb. (The substantivized /fsyant-/ 'cattle-bred', /sauvant-/ 'saviour' inflect like thematic participles.)

The inflection of the t-stems

<table>
<thead>
<tr>
<th>t-stems</th>
<th>n-stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns amrt(āl)ās-ca, avaitās</td>
<td>Ns hans, davans</td>
</tr>
<tr>
<td>A amrtalahām</td>
<td>A jīvans, iṣsans, n. yasahyan</td>
</tr>
<tr>
<td>G amrtiās-ca</td>
<td>G fiṣyantam</td>
</tr>
<tr>
<td>I hunariālā</td>
<td>I sauṣyantah, adruṣyantah</td>
</tr>
<tr>
<td>L amrīāti</td>
<td>L fiṣyantai, hanantai</td>
</tr>
<tr>
<td>Lp nafśu-ca</td>
<td>L iṣanti</td>
</tr>
<tr>
<td>Nd amrtiālā</td>
<td>Np dantah</td>
</tr>
<tr>
<td></td>
<td>Np afṣuyantah, marantah</td>
</tr>
<tr>
<td></td>
<td>A jīvannah, rapantah</td>
</tr>
<tr>
<td></td>
<td>G sauṣyantaḥ</td>
</tr>
<tr>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td>L</td>
</tr>
<tr>
<td></td>
<td>Gd</td>
</tr>
<tr>
<td></td>
<td>static</td>
</tr>
<tr>
<td></td>
<td>N stivas, vispāhiṇas</td>
</tr>
</tbody>
</table>

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. /-vāḥ/ < *vās, with the exception of the comparative adjective, type mavan- ‘like me’.
The nom. sg. in -ans is due to restoration of the sequence -ts > -s, which had become -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

<table>
<thead>
<tr>
<th>Masculines</th>
<th>Neuters</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>manbra?an- poet</td>
<td>dāman- place</td>
<td>namahan- reverent</td>
</tr>
<tr>
<td>aryaman- companionship</td>
<td>nāman- name</td>
<td>barziman- YH high</td>
</tr>
<tr>
<td>karpan- hostile teacher</td>
<td>rāman- rest</td>
<td>īšan- ntr/adj.? powerful</td>
</tr>
<tr>
<td>asan- stone</td>
<td>vardman- increase</td>
<td>martan- mortal</td>
</tr>
<tr>
<td>tašan- creator</td>
<td>cagman- YH gift</td>
<td>ārtavan- truthful</td>
</tr>
<tr>
<td>uxsan- bull?</td>
<td>zaiman- state of waking</td>
<td>sīcišovan- understanding</td>
</tr>
<tr>
<td>ru?an- soul</td>
<td>annman- spirit</td>
<td>?svan- virtuous</td>
</tr>
<tr>
<td>mağavan- adherent of Zarathustra’s society</td>
<td>dvanman- cloud</td>
<td>īsvan- being lord of</td>
</tr>
<tr>
<td>advan- road</td>
<td>cašman- eye</td>
<td>fraxšnin- careful</td>
</tr>
</tbody>
</table>

Adjectives

<table>
<thead>
<tr>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>namahan- reverent</td>
</tr>
<tr>
<td>barziman- YH high</td>
</tr>
<tr>
<td>īšan- ntr/adj.? powerful</td>
</tr>
<tr>
<td>martan- mortal</td>
</tr>
<tr>
<td>ārtavan- truthful</td>
</tr>
<tr>
<td>sīcišovan- understanding</td>
</tr>
<tr>
<td>?svan- virtuous</td>
</tr>
<tr>
<td>īsvan- being lord of</td>
</tr>
<tr>
<td>fraxšnin- careful</td>
</tr>
</tbody>
</table>

The inflection of the n-stems

|-an- | -van- | -man-
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns</td>
<td>karpā</td>
<td>ru?ā</td>
</tr>
<tr>
<td>A</td>
<td>ru?ānam</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Np</td>
<td>karpānah</td>
<td>ru?ānah</td>
</tr>
<tr>
<td>A</td>
<td>asanah</td>
<td>rūnas-ca</td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1) Written urvā. The analysis is uncertain. Also /(?)-van-1/ has been proposed.
adjectives

<table>
<thead>
<tr>
<th>Case</th>
<th>Ns</th>
<th>A</th>
<th>G</th>
<th>D</th>
<th>Np</th>
<th>A</th>
<th>G</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>-an-</td>
<td>n. svan</td>
<td>martānah?</td>
<td>martānah</td>
<td>barzimana?am</td>
<td>YH</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-van-</td>
<td>áriavanam</td>
<td>áriavnah</td>
<td>áriavnai</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-man-</td>
<td></td>
<td>áriavnai</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

neuters

<table>
<thead>
<tr>
<th>Case</th>
<th>Ns</th>
<th>A</th>
<th>G</th>
<th>D</th>
<th>L</th>
<th>NAp</th>
<th>A</th>
<th>G</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>-an-</td>
<td>anma</td>
<td>anmanai</td>
<td>anmanai, usan</td>
<td>nāmaniy YH</td>
<td>sāhvani</td>
<td>nāmām YH</td>
<td>anafśmām</td>
<td>haxmām YH</td>
<td>namānis</td>
</tr>
<tr>
<td>-van-</td>
<td>haxma YH</td>
<td>haxmanh</td>
<td>haxmanai YH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-man-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 luxshanah as against Skt. ukṣanah. 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 luxāl we have no weak cases.

The Ns ladvāh/ (advā) is either a mistake, or due to analogy as with the adjectives in -vant-.

The Ap lasanah/ has -an-. This may be the old hysterodynamic form of the acc. pl.

/manθra-āl has gen. sg. /manθrānah/ from *manθra-ān-ah.
/lfraxšnl/ is nom. sg. masc. or neuter. If it is an n-stem (Skt. pra-jn-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 -än (*-män was assimilated to -mäm). 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 -än (*-män became -mäm). We have -ani twice and -äni once. LAv. has baënani and cinmâni. -än continues PIE -ön, -ani -on-h₂; -äni is a contamination.

The form /svan/ Nsn is unclear.

26. r- (and r/n-) stems

Masculines

nar- man
ālar- fire
dālar- giver
brālar- brother
brālar- protector
abijartar- YH welcomer
pijar- father
star- star
sāstar- ruler

Feminines
dugdar- daughter
mālar- YH mother

Neuters
vadar weapon
audar cold
vasdvar mastership
sahvar teaching
hu?ar sun
ayar day
azan- day
rāzar pronouncement

Adjectives
kamnānar- having few men
janar- men-killing
xrunar- men-violating
The inflection of the r- and r/n-stems

Masc.-fem.
Ns  dātā  ptā  nā  ātaṛś YH
A  dātāram  ptaram  naram  āṭṛm
G  nṛṣ  āḍbraḥ
D  pīḍrai, ṕṛai  naraī  āḍraɪ
I  V
Np  marxṭārah  naraḥ
A  māṭṛṇś-ca YH  nṛṇṛ
g  duṛdṛṇam  janṛām,1  strāṇam-ca2
V  mālaraḥ YH

Neuters
NS  rāzar  huṇar  ayar  vazdvār
G  rāzanḥ  huṇanh  ayār  sahuṇā
Np  G  rāṣnaṇam

1. Written jōṇaram. Cf. ch. I on 53.8c.
2. Written strōm-cā

The inflection of /dātāl/, with long grade in the strong forms, is the general one, as in Sanskrit.

The type pṭar- (brāṭar-, māṭar-, nar-) has -ar- < *-er- in the strong cases. On the inflection of pṭar- see IV 52.2.

The gen. sg. /nṛśl/ agrees with Skt. pithṛ < *-trs. The ending originated in a static paradigm, e.g. *mēḥ₂-tr-s.

Acc. pl. /māṭṛṇś, nṛṇś/ have vocalic r. It is written -ṛṇś, q probable indicating nasalized s: -ṛṇś = -ṛṁṇś = ṛṇś. LAv. writes -ṛṇuś. -ṛṇś is a static ending. LAv. ṛḍṛṇ contains *-ṛṛṇ, which points to PIE *-er-ns.

It is supposed that lāṭarśl m. originally was a neuter. The acc. lāṭrml has -m added to original (neuter) *āṭr. This addition must have occurred before the development ṛ > -ar. This development is found in the voc. lāṭarī. Therefore the nom. sg. must have been *āṭrī. The form āṭrś shows the later development ṛ > arś. One might consider a static inflection *HēH-tr(s), -tr-m.

/huṇar, huṇanh/ are from *suH-r, *suH-en-s.

Plural /aḍvṛ, sahuṇār/ are the only forms in -ar in Indo-Iranian.

One neuter, /aḍvṛ/ has an r-stem in an oblique form, gen. /aḍvṛśl/.
The form has not been explained. An innovation is difficult to understand, as there was no model. (LAv. has gen. sg. ātarś < *ātrś; that this form is recent is shown by abl. ādraț, as this form is always derived from the genitive; cf. noraț, gen. noraś.) One might consider static inflection, gen. *Heloïd-r-s.

27. i- and u-stems

### i-stems

<table>
<thead>
<tr>
<th>Masculines</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>frädi - growth</td>
<td>dämi - creative</td>
</tr>
<tr>
<td>āri - harm (?)</td>
<td>varucașāni - farseeing</td>
</tr>
<tr>
<td>rši - seer</td>
<td>mänari - pious?; f.?</td>
</tr>
<tr>
<td>sti - m/f? possession?</td>
<td>?duśṛtri - badly kept</td>
</tr>
<tr>
<td>asti - guest</td>
<td>caxri - turning into</td>
</tr>
<tr>
<td>duśsasti - false prophet</td>
<td>būri - plentiful</td>
</tr>
<tr>
<td>asištī -? he who orders?</td>
<td>Zarabuṣtri - (descending) from Z.</td>
</tr>
<tr>
<td>d(a)ršti - m/f? sight</td>
<td>visvapati - YH having drink for all</td>
</tr>
<tr>
<td>asti - YH disaster</td>
<td>rânyaskrti - bringing joy</td>
</tr>
<tr>
<td>utayūti - enduring; f.?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Feminines</th>
<th>Adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>grzdi - favour</td>
<td>dämi - creative</td>
</tr>
<tr>
<td>dämi - creation</td>
<td>varucașāni - farseeing</td>
</tr>
<tr>
<td>jani - woman</td>
<td>mänari - pious?; f.?</td>
</tr>
<tr>
<td>maini - requital</td>
<td>?duśṛtri - badly kept</td>
</tr>
<tr>
<td>mänari - murder?; adj.?</td>
<td>caxri - turning into</td>
</tr>
<tr>
<td>ābri - danger</td>
<td>būri - plentiful</td>
</tr>
<tr>
<td>aramati - piety</td>
<td>Zarabuṣtri - (descending) from Z.</td>
</tr>
<tr>
<td>tuṣnāmati -? silent thought?</td>
<td>visvapati - YH having drink for all</td>
</tr>
<tr>
<td>tarahmati - insolence</td>
<td>rânyaskrti - bringing joy</td>
</tr>
<tr>
<td>parimati - pride</td>
<td>utayūti - enduring; f.?</td>
</tr>
<tr>
<td>vrati - vow</td>
<td></td>
</tr>
</tbody>
</table>
jiti- YH life
hujiti- good life
aniti- bad condition
duśiti- distress
huśiti- comfort
huṛiti- easy access
āśkti- connection
ārti- lot, part
fraṛti- coming up
fravara- YH confession of faith
ākrāti- provision
humṛti- good attention?
sti- m/f? possession?
avapasti- falling down
fraṣasti- fame.
āsti- height
patyaṣṭi- foundation (-tiṣṭa-?)
cisti- thought
hucisti- good thought
avisti- lack of
fraṣṭi- YH completion
iṣṭi- will
θuāpiṣṭi- thy power
ādiṣṭi- instruction
d(a)rśti- m/f? sight
hamp(a)rśti- talk
uṣṭi- wish
yauṣṭi- YH sanctification
būṣṭi- prosperity
asruṣṭi- disobedience
utayūṭi- freshness; adj.?
zūṭi- call
āṣuṭi- fat(ness)
vrāṣuṭxti- pleasure
āḍi- danger

Hysterodynamic are the following words:
Masculines
pati- lord
kavi- priest
raṇi- riches
uzūṭi- help
Adjectives
huṣaxi- friendly
manzaraṇi- granting wealth
The inflection of the i- and u-stems

<table>
<thead>
<tr>
<th>Ns</th>
<th>proterodyn.</th>
<th>hysterodyn.</th>
<th>proterodyn.</th>
<th>hysterodyn.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ištīš</td>
<td>hušaxā, kavā, patiš</td>
<td>xratuš, n. āyu</td>
<td>dargabāzuš YH, ahu</td>
</tr>
<tr>
<td>A</td>
<td>ištīm</td>
<td>hušaxāyam</td>
<td>xratum n. vahu</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>ištaiš</td>
<td>rāyah, (pataiš)</td>
<td>xratuš yauš</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>aztāyai1 YH</td>
<td>paṇya-ça²</td>
<td>hvaṭavai yavaï</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>cistiś</td>
<td></td>
<td>xratū yavā</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>ištā</td>
<td></td>
<td>xratu vahāu</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>pratu</td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>aramatai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Np</td>
<td>rātayah</td>
<td>kavayaś-ça³</td>
<td>xratavah</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>ištīš</td>
<td>xratuš</td>
<td>vahu</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td>dahyunaśam</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>parubyah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>paruśu</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V</td>
<td>jītayah</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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. sākhāyam.

**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 Gāthic we find xratā and pārolā, -ō. It could be that the latter is a mistake for -ā (influence of surrounding kavinō and zomō). -ā probably represents /-āu/.

The gen. du. /manyu-pāh, ahu-pāh/ 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 hīdauš 48.7c has been taken as a hysterodynamic nom. sg., or corrected into /hīdauš/, as a gen. sg.

28. i?-, u?-stems

**i?-stems**

proterodynamic

<table>
<thead>
<tr>
<th>fem.</th>
<th>adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>būmi?- earth</td>
<td>vahyahi?- YH better</td>
</tr>
<tr>
<td>kani?- girl</td>
<td>ahurāni?- divine</td>
</tr>
<tr>
<td>nāri?- YH woman</td>
<td>artauni?- truthful</td>
</tr>
<tr>
<td>manauhri?- admonisher</td>
<td>hati?- being</td>
</tr>
<tr>
<td>taviši?- strength</td>
<td>vāstravati?- having meadows</td>
</tr>
<tr>
<td></td>
<td>arśanavati?- with horses</td>
</tr>
<tr>
<td></td>
<td>śyati?- dwelling (ptc. ši-)</td>
</tr>
<tr>
<td></td>
<td>maikanti?- YH glittering</td>
</tr>
<tr>
<td></td>
<td>hambavanti?- YH uniting oneself</td>
</tr>
<tr>
<td></td>
<td>vahu?- good</td>
</tr>
<tr>
<td></td>
<td>yazvi?- young</td>
</tr>
<tr>
<td></td>
<td>azi?- in milk</td>
</tr>
</tbody>
</table>

**u?-stems**

<table>
<thead>
<tr>
<th>fem.</th>
<th>adjectives</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
hysterodynamic
masc. raśi- charioteer

u?-stems
proterodynamic: none
hysterodynamic
masc. fem. adj.
hizu?- tongue tanu?- body přitanu?- whose body is condemned fsratu?- fullness?

1) Written vahehi
2) Written arśnavant-

<table>
<thead>
<tr>
<th>i?-stems</th>
<th>u?-stems</th>
</tr>
</thead>
<tbody>
<tr>
<td>proterodynamic</td>
<td>hysterodynamic</td>
</tr>
<tr>
<td>hysterodynamic</td>
<td>hysterodynamic</td>
</tr>
<tr>
<td>Ns vahvi</td>
<td>fsratuś</td>
</tr>
<tr>
<td>A vahvīm azīm raśi</td>
<td>tanuśam</td>
</tr>
<tr>
<td>G vahvīāh azyāh</td>
<td>tanuśah hizūśah fsratuśah YH</td>
</tr>
<tr>
<td>D vahvīāi</td>
<td>tanuśai</td>
</tr>
<tr>
<td>I vahvīā</td>
<td>hizūśa</td>
</tr>
<tr>
<td>V yazvi</td>
<td>fsdratvād</td>
</tr>
<tr>
<td>Np manauhriś</td>
<td>přitanuśah</td>
</tr>
<tr>
<td>A arśnavaliś azīś YH</td>
<td></td>
</tr>
<tr>
<td>G nārśnaśam YH</td>
<td></td>
</tr>
<tr>
<td>D śyatibyah</td>
<td>hizūbiś</td>
</tr>
<tr>
<td>I</td>
<td>*tanuśu-ca</td>
</tr>
<tr>
<td>L</td>
<td></td>
</tr>
<tr>
<td>Nd laviśi azī</td>
<td></td>
</tr>
</tbody>
</table>

i?-stems
The proterodynamic type is that of Skt. deśi, the hysterodynamic one that of vykīh.

/vahvīāh/ etc. has -i- for y according to Sievers’ law.

u?-stems
On these forms see IV 53.3 (also on an acc. /tanum/). YH fsratwō must have -tu(v)ō, or else the -t- would have become a fricative.

A form tanuśi-cā 43.7e has been taken as a mistake for loc. pl. -śu.

29. ā-stems
grbā- understanding vananā- victory
vi?-ā- wrapping; attention? dayanā- vision
sārdana- adversaries vyānā- competence
manā- YH thinking gnā- woman
kainā- punishment          habīavṛṣṭa- realization
sinā- destruction          gaībā- herd
sāsnā- teaching            maiḥā- change
dvaiḥā- threat
aspā- night                hiḥā- partner
urvaṛā- plant              ahuva- life
frasā- question            arampīṭvā- afternoon
vidvairśa-1 enmity         aganyā- YH cow
jijja- YH desire to win    māyā- supernatural power
sprziṭā- eagerness         vrāzā- joy, bliss
rāḷā- gift                 iṇā- offering of milk

The inflection of the ā-stems

Ns    dayanā
A     dayanām
G     dayanayāḥ
D     dayanayāi
I     dayanā                      iṇā
        dayanayā sāsnaya urvāzyā YH
L     vyānaya?
V     brxṭai
            svantā

Np    dayanāḥ
A     dayanāḥ sāsnāḥ, -āś-
G     sāsnanaḥam
D     dayanābyah YH vazyamnābyah
I     dayanābiṣ gaibahu
Nd    ubai

On the development of the laryngeal see IV 53.3.

The gen., dat., instr., loc. sg. have -āy- while OP has -āy- and Sanskrit -āy- but -āy- in the instr. The last form is of pronominal origin, -āy- is not well explained. Avestan may have generalized -āy-, unless it is only graphic for /āy/; cf. on the gen. pl. YH has -y- instead of -āy-, clearly from the iṛ-stems. It is remarkable that the two forms in the YH have -y-, while Gathic has only -āy- (manyā, urvāzyā).

The loc. sg. /-āyā/ could be *-āH-ī + the particle -a (as in LAv. -ava of the u-stems).

The voc. sg. has beside /-aī/ (only /brxṭaī/ 48.6b) a form in -ā, /svantā/ 33.13c.

1) mostly corrected into /vidvaiśa-1 'enemy'.
The gen. pl. has */-anaʔam/*, where the first short */-a/* may be graphic for */ā/*.

210. *a*-stems

Personal names have been included, pronominal adjectives have not. Words in */-jya/* are mostly of uncertain interpretation: they can have the suffix */-iʔa/* or have vocalic */i/* according to Sievers’ law. In the latter case the phonemic interpretation is */-ia/*, as the */j-/* (of */jya-/*) is automatic. Therefore we shall write */-iʔa/* when we cannot decide between the two forms.

Masculines

*Mada*- intoxicating drink  *Rāna*- thigh
*Spāda*- army  *Yāna*- entreaty?
*Rāda*- caretaker  *Hvafrna*- sleep
*Vaida*- acquirer, -isition  *Vadamna*- bridegroom
*Skanda*- destruction  *Varna*- choice
*Myazda*- offering  *Vaśna*- will
*Maga*- gift  *Vasna*- worship
*Madyaimaḥa*- Pn  *Bāna*- ground?
*Sanha*- teaching  *Djāmaʔaspa*- Pn
*Sardi(ʔ)a/-dya?- fighter  *Visthaʔaspa*- Pn
*Flanhi(ʔ)a- cultivator  *Haitacapsa*- Pn
*Vaiphi(ʔ)a- PN? adj.?  *Hunara*- ability
*Napti(ʔ)a- descendant  *Javara*- furtherer
*Marti(ʔ)a- mortal  *Zara*- grace

Feminines

*Sanda*- wild animal  *Duxṣara*- ?
*Datika*- YH  *Vajyardra*- driver
*Pasuka*- YH domestic animal  *Vir- man
*Rama*- violence  *Uṣtra*- camel
*Spitāma*- PN  *Zarabuṣṭra*- PN
*Yama*- twin  *Frasaʔuṣtra*- PN
*Kāma*- desire  *DaOra*- bestower
*Rāma*- cruelty  *MiOra*- contract
*Hadma*- m/n? seat  *ManOra*- mantra
*Grahma*- PN?  *Pu8ra*- son
*Vahma*- glorification  *Ansa*- part
*Dasma*- veneration  *Vraisa*- turning-point
*Aiśma*- cruelty  *Darsa*- seeing
*Hacana*- m/n? companion  *Dvafsa*- distress
*Friʔana*- PN  *Tkaiśa*- false prophet; deceit
*Uśāna*- life
THE NOUN

131

gauṣa- ear
srauṣa- obedience
zauṣa- pleasure
vaṛata- wind
vanta- praise
marta- mortal
zasia- hand
ansta- evil
stauta- song
dūta- messenger

kāṭa- requital
Haugua- PN
sava- m/n? salvation
zava- call
Bandva- PN
daiva- daiva
gaya- life
jaya- victory
xḍaya- ruler
vāza- draught animal

Neuters
pada- foot
mižda- wages
baga- share
bāga- share
āmanaha- intention?
havapaha-? YH creative power
huṇahavipā- full lifetime
mrždika- mercy
hadma- m/n? seat
garma- heat
hacana- m/n? companionship
vaidana- possession
sanhana- teaching
mana- instruction?
frā(ṛ)ṣaṇana- care
āpana- profit
urzana- community
ādāna- portion
avahāna- stopping
dmāna- house
dyumna- glory
hākurna- association
ṣyauṭha- work
vāra- will
sādra- injury; adj.?
vāstra- meadow
xṛafstra- monster
sanstra- teaching
xṣaṭra- rule

svayaḥbra- atonement (sp-?)
vyābra- protection
dābra- gift
huṇābra- happiness
rāfrā- support
śaiḥra- dwelling-place
ciṭra- seed
darfra- maintenance
carkṛṭra- hymn of praise
vaxbra- speech
mūbra- urine
humata- YH good thought
vṛata- order
dāla- law
āyāpta- riches
ārta- arta
p(a)rśa- question
huv(a)rśa- good actions
daxśta- sign
rixta- remainder
frāḍaṭa- increase
hāpiṭa- seventh
maṇḍāṭa- what should be considered
parigaiṭa- transmitting herds
āhāṛṭa- capturing
viciṭa- judgment
zanta- birth
arṭa- effort
hvarṭa- food
duṣṭvarṭa- bad food
Atonement?  
Word  
Your word  
True word  
Salvation  
Good action  
Good relation  
Small herds  
Violation  
Authority  

Adjectives  
Both  
Light  
Pernicious?  
Welcome  
Complete  
Long  
Spiritual  
Risible  
Praising  
Of the community  
Of the worship  
Powerless  
Roguish? m?  
Desirable  
Friendly  
Agricultural  
Powerful  
Strong  
Manifest  
Praising  
Fastest  
Of good aim  
To be called  
Alive  
First  
Bad  
Our  
Your pl.  
Your pl.  
Same  
Last  
Most shining  
Holiest  
Very many  
Sweet  
Pious?  
Belonging to  
Brave  
Efficient  
Careful  
Bringing  
Giving profit  
Of bad thinking  
Attained?  
Of H.  
Hateful  
Stretched out  
Glowing  
Of the kavi’s  
Undiminishing  
Choosing badly  
Near  
With what actions  
Of evil deeds  
Of good deeds  
Wild  
Swollen  
Next  
Which of two  
Chosen by AM.  
Guarding  
Humble  
Harmful; n.?  
Salutary  
Careful  
Incomparable?  
Strong  
Wicked  
Wise  
Distinguishing  
YH beautiful  
Shining
manzāṣṣastra- granting power
duṣṣṣastra- ruling badly
huṣṣastra- ruling well
huṣṇāṣṣa- with good bathing
cidra- bright
dūra- far
xrūra- cruel
asūra- weak
Tūra- PN
suxra- bright
gūzra- hidden
aiṣa- wild
huṇandarsa- sunlike
fraṣa- shining; healed?
aiva- powerful
anaiva-powerless
advaiṣa- non-hostile
raṝrśa- estranged
dūravāsa- ?
hazauśa- like minded
Vivahuśa- of V.
rūśa- needy?
darsata- visible
yazata- YH venerable
nidāta-laid down
śyāta- happy
kudazāta- YH wherever born
hvaṇīta- easy to travel
svanta- holy
djītarta- violating A.
hukrta- well made
amṛta- immortal
ustāṇazasta- with outstretched hands
vista- found
manavista- ?
ahamusta- repulsive
xṣūstra- molten
aśīta- arrived at?
fraṇīṣṭa- stimulated
sraṇīṣṭha- YH most glorious
zāṣṭāṇīṣṭha- set in motion by the hand
aciṣṭa- worst
vāhīṣṭha- best
aujīṣṭha- strongest
vaidīṣṭha- knowing best
nadvīṣṭha- nearest
zravīṣṭha- most believing
xrauvīṇīṣṭa- hardest
svanīṣṭha- holiest
abibarīṣṭha- bringing good luck best
marīṣṭha- remembering best
āśīṭha- fastest
saviṣṭha- strongest
maziṣṭha- largest
vispa , , , of all
raṇīṣṭha- rightest
urāṇīṣṭha- giving greatest bliss
vāṇīṣṭha- ?
barīṣṭha- YH highest
duṣv(ar)ṛṣṭa- of evil deeds
abidrīṣṭha- visible
uṣṭha- (diff. interpr.)
daivauṇīṣṭha- liked by the daivas
vraṭha- friendly
dāṭha- just
adāṭha- unrighteous
hwagṛṣṭha- YH rushing forth of their own
frādatgāṭha- furthering herds
maitṛa- false
brxṛa- honoured
aiva- one
jīva- alive
visva- all
rśva- high
rthva-worthy
lāya- secret
hāṭhahya- offering connection
mīṭhahya- false
auṣṭya- praiseworthy
anya- other
The inflection of the a-stems

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns</td>
<td>sanhah</td>
<td>yamas-</td>
<td>ártam</td>
<td>ártam</td>
</tr>
<tr>
<td>A</td>
<td>sanhahya</td>
<td>ahuram, gayam</td>
<td>śyauḥnam</td>
<td>śyauḥnam</td>
</tr>
<tr>
<td>G</td>
<td>gayahya</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>zauśat, virāt-ca</td>
<td>śyauḥnāī</td>
<td>śyauḥnāī</td>
<td>śyauḥnāī</td>
</tr>
<tr>
<td>D</td>
<td>ahurāi, ahurāya</td>
<td>śyauḥnāī</td>
<td>śyauḥnāī</td>
<td>śyauḥnāī</td>
</tr>
<tr>
<td>I</td>
<td>sanhā</td>
<td></td>
<td>śyauḥnā</td>
<td>śyauḥnā</td>
</tr>
<tr>
<td>L</td>
<td>markai-ca</td>
<td>śyauḥnāi</td>
<td>śyauḥnāi</td>
<td>śyauḥnāi</td>
</tr>
<tr>
<td>V</td>
<td>hūpāthrayā</td>
<td></td>
<td>śyauḥnā</td>
<td>śyauḥnā</td>
</tr>
<tr>
<td>Np</td>
<td>sanhā, sanhāhah</td>
<td></td>
<td>śyauḥnā</td>
<td>śyauḥnā</td>
</tr>
<tr>
<td>A</td>
<td>astanh, astans-ca</td>
<td>śyauḥnā</td>
<td>śyauḥnā</td>
<td>śyauḥnā</td>
</tr>
<tr>
<td>G</td>
<td>pasukanāram YH</td>
<td>śyauḥnaṇam</td>
<td>śyauḥnaṇam</td>
<td>śyauḥnaṇam</td>
</tr>
<tr>
<td>D</td>
<td>marṭaibyaḥ, dātaibyas-ca</td>
<td>śyauḥnāīś</td>
<td>śyauḥnāīś</td>
<td>śyauḥnāīś</td>
</tr>
<tr>
<td>I</td>
<td>sanhāś</td>
<td>marṭaśu</td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>L</td>
<td>visvā</td>
<td>visvā</td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>V</td>
<td>spitamākāh</td>
<td></td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>Nd</td>
<td>yamā, vāzā</td>
<td></td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>G</td>
<td>rānayāh</td>
<td></td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>DIA</td>
<td>zastaibyā</td>
<td></td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
<tr>
<td>L</td>
<td>zastayau</td>
<td></td>
<td>śyauḥnaiś</td>
<td>śyauḥnaiś</td>
</tr>
</tbody>
</table>

Dat. sg. /-āil/ is the normal form, but there are some instances of /-āyal/ (/ahurāyal 29.5a, /magāyal 29.11b, /hvarāyal 34.11a, /frādaḥāyā/ 45.9d, /vaḥmāyal 46.10d, 53.2b, /vispāyāl 53.1c, 4d). These forms are written /-āi.ā because scholars only knew the dat. in -āi. Asā yecā must be read /ārātāya-ca/ (30,1c, 51,2a). It has further been assumed in 31,16b /frādaḥāyā/ and 51,4a /mrζdikāyā/.

Nom. pl. The ending -ā is supposed to be the neuter pl. ending -ā, as a collective.

Nom. du. (ā) varṇā 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.)

<table>
<thead>
<tr>
<th></th>
<th>masc.</th>
<th>neuter</th>
<th>feminine</th>
</tr>
</thead>
<tbody>
<tr>
<td>-a</td>
<td>170</td>
<td>-a 45</td>
<td>-ā 24; -i 1</td>
</tr>
<tr>
<td>-u</td>
<td>19</td>
<td>-u 1 + 130</td>
<td>-vi 13</td>
</tr>
<tr>
<td>-i</td>
<td>4</td>
<td>-i 1</td>
<td></td>
</tr>
<tr>
<td>-nt</td>
<td>20</td>
<td>-nt 10</td>
<td>-ati 5</td>
</tr>
<tr>
<td>-n</td>
<td>35</td>
<td></td>
<td>-ni 1</td>
</tr>
<tr>
<td>-h</td>
<td>2</td>
<td>-h 1</td>
<td></td>
</tr>
<tr>
<td>-C</td>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 -i? is /Spitami?/ 'of the Spitama-family'.

u-stems. Neuter is gen. sg./kasau?/ and 130 forms of /vahu-/ (the high number being due to Vahu Manah). Feminine are /vahui?/ and /yazvi?-/. n-stems. 28 forms are from /artavan-/. Feminine is /artauni?-/.

s-stems are /aujah-, vasah-/, ntr. /baduʃ/?
Consonant-stems are /caga?-/, frād-, maz- (on which see 22), /vid-/. Unclear is /yas-/ 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 -iṣṭa- is frequent.
These suffixes were added to the root in the full grade (but \(-\text{daH}\) had the form \(-\text{dH}\)). Note \(*\text{kúH-ró-}, *\text{héuH-is-}; *\text{kriH-ró-}, *\text{kretH-is-}. For the flexion of \(-\text{yah-}\) see 23.

All forms occurring are:

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Meaning</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\text{aka-})</td>
<td>bad</td>
<td>(\text{aš-yah-})</td>
</tr>
<tr>
<td>(\text{ašaujah-})</td>
<td>very strong</td>
<td>(\text{auj-išta-})</td>
</tr>
<tr>
<td>(\text{āsu-})</td>
<td>quick</td>
<td>(\text{āš-išta-})</td>
</tr>
<tr>
<td>(\text{mar-})</td>
<td>to remember</td>
<td>(\text{mar-išta-})</td>
</tr>
<tr>
<td>(\text{maz-})</td>
<td>big</td>
<td>(\text{maz-išta-})</td>
</tr>
<tr>
<td>(\text{*asna-})</td>
<td>near(^1)</td>
<td>(\text{nad-yah-}) weaker</td>
</tr>
<tr>
<td>(\text{ādra-})</td>
<td>(^2)</td>
<td></td>
</tr>
<tr>
<td>(\text{rzū-})</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(\text{L. sūra-})</td>
<td>strong</td>
<td>(\text{raz-išta-})</td>
</tr>
<tr>
<td>(\text{svanta-})</td>
<td>holy</td>
<td>(\text{sau-išta-})</td>
</tr>
<tr>
<td>(\text{vahù-})</td>
<td>good</td>
<td>(\text{svan-yah-})</td>
</tr>
<tr>
<td>(\text{vah-})</td>
<td>knowing</td>
<td>(\text{svan-yah-})</td>
</tr>
<tr>
<td>(\text{L. urvād-})</td>
<td>to become happy</td>
<td>(\text{svan-yah-})</td>
</tr>
<tr>
<td>(\text{urāz-})</td>
<td>to be glad</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{L. xruždra-})</td>
<td>hard</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{zrazda}-)</td>
<td>believing</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{L. barazant-})</td>
<td>high</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{L. srīra-})</td>
<td>beautiful</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{bar-})</td>
<td>to bring</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>With (-\text{tama-}):</td>
<td></td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{fraša-})</td>
<td>shining</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{paru-})</td>
<td>much</td>
<td>(\text{vah-yah-})</td>
</tr>
<tr>
<td>(\text{svanta-})</td>
<td>holy</td>
<td>(\text{vah-yah-})</td>
</tr>
</tbody>
</table>

\(^1\) In the adverb \(\text{lasnāl. asna-}\) from \(*\text{nsd-no-}\).

\(^2\) From \(*\text{nhs dhro-}\).
CHAPTER SEVEN

THE PRONOUN

1. Personal pronouns

The first and second persons

<table>
<thead>
<tr>
<th></th>
<th>encl.</th>
<th>encl.</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>'T' azam</td>
<td>'you' tu?am²</td>
</tr>
<tr>
<td>N</td>
<td>az, as-</td>
<td>tū</td>
</tr>
<tr>
<td>A</td>
<td>mā</td>
<td>ṭva?am</td>
</tr>
<tr>
<td>G</td>
<td>mana¹</td>
<td>tava</td>
</tr>
<tr>
<td>A</td>
<td>mat</td>
<td>ṭvāt</td>
</tr>
<tr>
<td>D</td>
<td>mabya(h) mai</td>
<td>tabya(h) tāi</td>
</tr>
<tr>
<td>I</td>
<td>&quot;we&quot;</td>
<td>&quot;you&quot;</td>
</tr>
<tr>
<td>N</td>
<td>uayam³</td>
<td>yūṭam, yūṣ</td>
</tr>
<tr>
<td>A</td>
<td>ahma nāh</td>
<td>vāḥ</td>
</tr>
<tr>
<td>G</td>
<td>nah</td>
<td>vah</td>
</tr>
<tr>
<td>Ab</td>
<td>ahmat</td>
<td>śmat, yuṣmat</td>
</tr>
<tr>
<td>D</td>
<td>ahmabya nah</td>
<td>śmabya, yuṣmabya vah</td>
</tr>
<tr>
<td>I</td>
<td>śmā</td>
<td></td>
</tr>
</tbody>
</table>

1) kr. mā.nā 2) kr. tvām 3) kr. 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-byal/ is older than Skt. -bhyam.

'we'. /ahmal/ is older than Skt. asmān, 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 x) than yuṣma- (6 x). Sanskrit and LAv. (but here it is very rare) have only yuṣma-, 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)*
*ṭva- śmāka-, yuśmāka-
*hva- hva- (?)*

Whereas the forms in -āka- are inflected adjectives in Gathic, LAv. only has the forms in -ākom, used as genitive of the personal pronouns.

Sanskrit does not have an equivalent of *ma-*, it has only one form (tvābhīs; and from tāvaka- only tāvakēbhīyas). Skt. asmāka- and yuśmāka- are parallel to the Av. forms. Av. /na-/ has no parallel, /ma-, ḍva-/? must be old, cf. Gr. (e)mós, sós.

These pronouns have the pronominal inflection:

<table>
<thead>
<tr>
<th></th>
<th>masc.</th>
<th>fem.</th>
<th>masc.</th>
<th>ntr.</th>
<th>fem.</th>
<th>masc.</th>
<th>fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns</td>
<td>mah</td>
<td>ṛvah</td>
<td></td>
<td>ṛvai</td>
<td>hva</td>
<td>hva</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>mahya</td>
<td>mahyāḥ</td>
<td>ṛvahya</td>
<td>ṛvahyāḥ</td>
<td></td>
<td>hvaḥyāḥ</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>mahya</td>
<td>mahyāḥ</td>
<td>ṛvahyāḥ</td>
<td>ṛvahyāḥ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td>mahmāi</td>
<td>ṛvahmāi</td>
<td>hvaḥyāḥ</td>
<td>hvaḥyāḥ</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>mā</td>
<td>ṛvā</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>mā</td>
<td>ṛvā</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>mahmi</td>
<td>ṛvahmi</td>
<td>ṛvā</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td>ṛvāhu</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Np</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Np</td>
<td>nā</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>ahmākanh</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>ahmākāiś</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nom. sg. fem. /ṛvai, hvai/ < *-eh₂-i (see IV 53.3), cf. Lat. quae, hae-e; the type is unknown in Sanskrit.

/ḥva-/* has pronominal inflection in /ḥvaḥyāil 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. sā(s) sā tād. The nom. sg. is not found (one would expect *hā < *ha, *hō, *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 *sāu can be secondary (note that GAv. has m./hau/, f./hā/).

/ava- is derived from PIE *h2eu as is OCS oyu; Sanskrit has only gen. du. avaḥ.

2. /a-, i-/ with /ima- and /anāl.

/i-/ provides the accusative forms (/im, īl, ntr. pl. īl), /a-/ the others (/ayaml is based on PIE *h1e, with a deictic -i). The existence of a form /ahl (wr. ā, 29.6a) is doubtful. las-cīl rather contains the personal pronoun la/īl.—The gen. du. ās-ca might be /a-ōh/.—The fem. instr. is āyāl (wr. ōyā; it cannot be from /aiva- 'one', see II 18.6).

/ima- is derived from *imam, which is *im + the particle -am, reinterpreted as a-stem. The YH has imām, īmā; that GAv. has no such forms may be accidental.—The instr. /anāl is based on a Pie particle *h2en, as is OCS oṇ, Lith. anas.

3. /hi/ 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, sē, OP sāy continue PIE *soi (Gr. hoī), which seems an isolated form. (It might be an old dat.-loc. from *h1el-o-, i.e. *h1oi, with s- from *so). In Indo-Aryan it is found in MInd. se.

A stem lada- has been assumed for adāś 48.1a, 35.4, but the form has also been interpreted differently (lat āś/).

Not found in Gothic are, perhaps accidentally, Av. di- and aēsa-, aēla-

<table>
<thead>
<tr>
<th>ha-, ta-</th>
<th>hau, ava-</th>
<th>a-, i-, ima-, ana-</th>
<th>hī-</th>
<th>hai</th>
</tr>
</thead>
<tbody>
<tr>
<td>m.</td>
<td>f.</td>
<td>m.</td>
<td>f.</td>
<td>ntr. f.</td>
</tr>
<tr>
<td>Ns</td>
<td>hā</td>
<td>hau</td>
<td>ayam ah?</td>
<td>imām YH</td>
</tr>
<tr>
<td>A</td>
<td>tam</td>
<td>lām</td>
<td>avām im</td>
<td></td>
</tr>
<tr>
<td>ntr.</td>
<td>tat</td>
<td>avai</td>
<td>it</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td>ahya</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ab</td>
<td></td>
<td>ahmāt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td></td>
<td>ahmāi</td>
<td>ahyaī</td>
<td></td>
</tr>
<tr>
<td>I (tl)</td>
<td></td>
<td>avā</td>
<td>anā</td>
<td>ayā?</td>
</tr>
<tr>
<td>L</td>
<td></td>
<td>ahmi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**The Pronoun**

<table>
<thead>
<tr>
<th>m.</th>
<th>f.</th>
<th>m.</th>
<th>f.</th>
<th>m.</th>
<th>f.</th>
<th>ntr. f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Np</td>
<td>tai</td>
<td>tanh</td>
<td>tāh</td>
<td>avāh</td>
<td>īs</td>
<td>hiś</td>
</tr>
<tr>
<td>ntr</td>
<td>tā</td>
<td>avaišāṣam</td>
<td>aišāṣam</td>
<td>ābyaḥ</td>
<td>ābyaś-</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>D</td>
<td>I</td>
<td>L</td>
<td>Nd</td>
<td>tā</td>
<td>ayāḥ</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(a)ś-</td>
</tr>
<tr>
<td>G</td>
<td>D</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ābyā (?)</td>
</tr>
</tbody>
</table>

4. The relative pronoun

The relative pronoun is *ya/-, cf. Skt. yā-, Gr. ἡσ. Not clear is why the neuter *ya/- is written hyat: it must continue PIE *iōd. Note that it is not written ʰ (x). Perhaps it indicates that ʰ was voiceless.

<table>
<thead>
<tr>
<th>m.</th>
<th>f.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns</td>
<td>yah, yas-</td>
</tr>
<tr>
<td>A</td>
<td>yam</td>
</tr>
<tr>
<td>ntr</td>
<td>yat</td>
</tr>
<tr>
<td>G</td>
<td>yahya</td>
</tr>
<tr>
<td>Ab</td>
<td>yāt YH</td>
</tr>
<tr>
<td>D</td>
<td>yahmāi</td>
</tr>
<tr>
<td>I</td>
<td>yā</td>
</tr>
<tr>
<td>L</td>
<td>yahmi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Np</th>
<th>yai</th>
<th>yāh, yāś-</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>yanh, yans-</td>
<td></td>
</tr>
<tr>
<td>ntr</td>
<td>yā</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>yaišāṣam</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>yaibyāḥ, -as-</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>yāś</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td>yāhu</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nd</th>
<th>yā</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>yayāḥ</td>
</tr>
</tbody>
</table>

5. The interrogative and indefinite pronouns

The situation is rather complicated. The Gathic evidence is limited, but the situation seems clear.

Interrogative:
THE PRONOUN

/ci-/l, only Ns /cǐ/ (43.7c, substantivally);
/ka-/l, all forms, as substantive and as adjective;
/kataral ‘which of the two’. (The form is written with the second a long. Perhaps this is only graphic).

Indefinite:
/cei-/l + /cǐl/ as subst. (only after relative);
/ka-/l + /cǐl/ 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 ciś/ 31.18a;
/naicīṣi/ ‘nobody’.

Thus, interrogative are both /ci-/l and /ka-/l; when indefinite they are followed by /cǐl/ and /cǐl/ resp., or preceded by a negative particle (/māl, /naicī-/l; which make interrogative interpretation impossible). /cayya/ (indef.) is formally distinguished from interrogative /kaicya/.

Interrogative /ciś/ occurs only in /ciś ahi, kāhyā ahi/, cf. Skt. ko’śi kasyāsi ‘who are you and on whose side are you?’. (This is the only occurrence of /kaicya/ in Gathic.)

/cei-/ + /cǐl/ occurs only after the relative /ya-/:
/yastai ciścǐl/ 43.16a
/yā zi cǐl/ 47.5b
(This construction occurs twice again in LAv., Y 9.28, V 3.41; GAv. 47.5b is used in Y 12.1). As to /ka-+ cǐl/, it is mostly found after a relative, but interpretations differ:
/kascitl/ 49.5c
/kahmāicīl/ 43.1a, 44.16a
/kācīl/ 46.8c
/kahyācīl/ 33.11c

<table>
<thead>
<tr>
<th></th>
<th>fem.</th>
<th>masc.</th>
<th>fem.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ns kah, kas-; ciś</td>
<td>kā</td>
<td>kascīl; cīscā; (mā) ciś</td>
<td>naicīṣ</td>
</tr>
<tr>
<td>A kam</td>
<td>kām</td>
<td></td>
<td>naicim</td>
</tr>
<tr>
<td>ntr kat</td>
<td></td>
<td></td>
<td>naicīl</td>
</tr>
<tr>
<td>G kāhyā</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D kahmāi</td>
<td></td>
<td>kahmāicīl</td>
<td></td>
</tr>
<tr>
<td>I kā</td>
<td></td>
<td>kācīl</td>
<td></td>
</tr>
<tr>
<td>L</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Np kai</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A kanh</td>
<td></td>
<td>cīcā</td>
<td></td>
</tr>
<tr>
<td>ntr kā</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D kaibyah</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. *The pronominal adjectives*

Only a few of the adjectives that have pronominal inflection in Sanskrit occur in Gathic. From *luba-/* 'both' and *katara-/* 'which of two' forms that could have pronominal inflection do not occur.

*lvisva-/* 'all' does not have pronominal inflection: dat. */visvāi, visvāya/, nom. pl. */visvāhā/, gen. */visvana?am/. LAv. has pronominal inflection here. GAv. may have preserved the older situation.
CHAPTER EIGHT

THE NUMERAL

Cardinals

/aiwa-/ ‘one’. The form ëyä 47.2d does not belong to /aiwa-/; see II 18.6. The instr. sg. /aivä/ does not favour it either.
/daša/ ‘ten’.

Ordinals

/parvai-/ ‘first’, Skt. pūrva-, PIE *prHu-ios-, with -ia- according to Sievers’ law (-tHo- would have given Skt. -yá-).
/iditīya-/ ‘second’ occurs only as adverb in -am ‘for the second time’; Skt. dvitīya-.
/haṃtāda-/ ‘seventh’, Skt. saptātā-.
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

/abī/ adv., prep. towards, 7 × (abhi, OP abiy).
/adal/ adv. then 29.2a, 30.10a (ādhā). a- + *-dā.
/adah/ adv. under, below 44,4b (adhās). *qād-ēs, Goth. undār.
/antar/ adv., prep. within, between 33.7c, 49.3d, 51.1b (antār).
/anul/ prep. after, according to, towards 32.16c, 47.2b (ānu, OP anuv).
/anyadā/ adv. elsewhere YH 35.2 (cf. anyātra).
/anyadā/ adv. otherwise 51.10a (anyāthā). Suff. -thā.
/apal/ adv. away from' 32.9b, 33.4a (āpa).
/apil/ adv., prep. upon 6 × (āpi). PIE ēpi and/or ópi.
/aram/ adv. correctly, properly 44.8d, 45.11c, 51.14a (āram).
/asnāt/ adv. from nearby 45.1b (-). Abl. of asna- < *ṣid-na-, cf. /nazd-iṣṭa-.
/abā/ adv. thus, 10 × (athā) a- + -thā.
/abrē/ adv. here, there, then 31.12a, 46.16a (ātrā). a- + -tra-.
/aural/ adv. down(ward) 53.7c (cf. āva).
/aual/ adv. down, off, 4 × (āva, OP ava).
/avai/ interj. alas 45.3e.
/avar/ adv. down(ward) 29.11c (avār).
/aval/ adv. so long 28.4c (-).
/azdāl/ adv. certainly 50.1d (addā, OP azdā).
/āl/ adv. hither, towards; passim (ā, OP, ā).
/ākāh/ adv. certainly? 4 × (-).
/āl/ adv., then, but, and; passim (āt). Abl. of a-.
/āviš/ adv. openly 33.7c (āvis).
/bāl/ part. really YH 35.5, in bāl (cf. bāt, baqā).
/baduśi/ adv.? 53.4c.
/-cāl and, passim (ca, OP cā). PIE -kwe.
/canāl/ part. of generalisation and indefiniteness, 30.6a, 31.10c (cand).

Written cinā.
INDECLINABLES

/cit/ part. of emphasis, passim (cit, OP -cit). Ntr. sg. of *kwi-.
/citna/ interrog. adv. in any way 44.20a (-). cit + -na.
/id(a)rśāl/ adv. boldly 33.7a (dhrsāt). Acc. sg. ntr. of adj. in -ant.
/dbitāl/ adv. deceitfully, Ins. by himself, 49.2b (dvitā, OP duvitā-).
/dbitīyam/ adv. for the second time 45.1d (dvitīya-, OP duvitiyam).

Acc. sg. ntr. of 'second'.
/dūrāll/ adv. from afar 45.1b (dūrāt). Abl.
/dūrāll/ adv. far away 34.8c (dūrē). Loc.
/frac/ adv., prep. in front 30 x (pra, OP fra-).
/fracīnāl/ adv. long since, continuously 32.14b (cf. pradīvās, -vi). Instr.
/fracīnāl/ adv. continuously 30.5c, 53.2b (-). Acc. sg. ntr.
/hača/ prep. from, out of, in accordance with, 16 x (sacā, OP hacā).
/hačāl/ adv., prep. together with, 29.2b, 46.17c, 50.4b (sahā, sadha-, OP hadā). Probably *smp- 'one'.

/hām/ pref. together, 14 x (sām, OP ham-). PIE *smp- 'one'.
/hān/ prep. without 31.15b, 47.5c (sanatār). PIE *smpH-?
/hābrāl/ adv. together, at the same time, Ins. completely, 28.4a, 30.9c (satrā). *smp-.

/hiatal/ see /yat/.
/idal/ adv. here 29.8a (ihā, OP idā).
/īdāl/ adv. thus, 4 x (itiha).
/kadāl/ adv. when, 6 x (kadā).
/kal/ adv. ?, when? 28.5a (-). Acc. sg. ntr.
/kadāl/ adv. how, in what way? 11 x (kathā).
/kūl/ interv. adv. where? 51.4b, 53.9c (kā).-
/kudāl/ adv. where, 29.11a (kūha). OCS. kde, PIE *ku-dhe.

/kudrāl/ adv. where, whither, 8 x (kutrā).
/mal/ emphatic part., 12 x (sma).
/maśl/ adv. soon? very (much)? 32.2b, 34.9c (-).
/mašl/ adv. soon 53.8d (makṣā).
/manh/ adv. in mind, 5 x . Cf. /manh/.
/mal/ prep. (together) with, 9 x (smāl). *sm- 'one'.
/māl/ negative part., 31.17b.18a, 48.5a (mā, OP ma). PIE *mē.
/nail/ neg. part., and not, 5 x (-).

/nai/ negatory part., passim (nā, OP naiy). PII. na + il.
/nanāl (nana) adv. separated, differently 48.4d (nānā).
/nīl/ prev. down, back, into (nī, OP niy). PIE *ni.
/nīl/ adv. out(side) 44.13b (nīs).
/nūl/ adv. now, 6 x (nū, nū).
/nūrāl/ adv. now 31.7c (cf. nūnām). Dissimilated from *nūnam, or rebuilt.
/parīl/ prev. prep. round, about, against, beyond, 15 x (pārī, OP pari).
PIE *pēri.
/pati/ prev. prep. towards, against, 14x (OP patīy; cf. prāti). PIE *pōti (beside prāti, prāti).

/parah/ adv. prep. over, above 33.7b, 34.5c (parāh, OP para). Gen. sg., cf. Skt. paré (loc.), param (ntr.). PIE *peros, cf. pari < *pēri, Gr. pērā(n), Arm. heri, Osc. perum. Cf. /parā/.

/parāl/ adv. prev. away (from) 53.6c.7c (pārā, OP parā-). From *per- in /parah/.


/rāl/ adv. correctly, passim. Cognate with /aram/.

/tarath/ adv. prev. across, apart, superior to 45.11b (tīrās). PIE trHós.

/tāl/ adv. in this way, 5x. Instr.

/tāl/ part. now, but, 8x (tu, tā).

/thuath/ adv., then again, now...now 44.3d (tuād). Acc.sg.ntr. (Skt. tuā- one, several). Hitt. duān ... duān ‘d’un côté ... de l’autre’.

/utāl/ part. and YH 35.6, 40.4 (utā, OP utā).

/utīl/ adv., thus 45.2b, 38.4, 39.3 (ītī). The difference between u- and i- has not been explained.

/utpal/ prev. towards 30.6b, 45.5d, 53.8b.(ūpa). P/IE *Hupo.

/us/ prev. up(on), 5x (ūt, OP ud, us). The Avestan form developed before t-.

/ual/ emphasizing part. truly, indeed YH 36.3 (udī).

/vasah/ adv at will, 4x (-). Acc. sg. ntr. of /vasah-/.

/vayail/ interj. woc 53.7d (-).

/vāl/ part. or, passim (vā).

/vāl/ emphasizing part., 7x (vāvā). The Skt. word, with two accents, was built from two words.

/ual/ prev. apart, off, passim (vi, OP vi-).

/yadā/ adv., conj. when, 4x (yadā, OP yadā-taya).

/yail/ conj. when, becausec, (so)that, passim (ydd). Acc. sg. ntr. written hyat.

/yadāl/ adv., conj. in which manner, just like, passim (yātha).

/yānāl/ adv., conj. how, as 31.22a?, 43.10d?, 35.2 (-). yat + -na, cf. /ciñāl/.

/yābrāl/ adv. where, whither, in order to, passim (yātrā).

/yāvat/ adv., conj. how far, as far as, 5x (yāvat). Acc. sg. ntr. of yāvant-.

/yāvatāl/ adv. inasmuch as 43.8e (-). Instr. sg. of yāvant-.

/yāll/ adv. since, in so far 32.4a, 35.7? (yāt). Abl. of ya-.

/yazil/ conj. as, because, if, when, (8x (-). From yat x zī?

/zi/ part. for, indeed, passim (hi). PIE *gīhi.
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

<table>
<thead>
<tr>
<th>Case Form</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>aram</td>
<td>fraurt</td>
</tr>
<tr>
<td>anat</td>
<td>kat</td>
</tr>
<tr>
<td>ákāh</td>
<td>ñval</td>
</tr>
<tr>
<td>badus?</td>
<td>yat</td>
</tr>
<tr>
<td>cit</td>
<td>yāvat</td>
</tr>
<tr>
<td>d(a)rśat</td>
<td>vasaḥ</td>
</tr>
<tr>
<td>dbhītāyam</td>
<td></td>
</tr>
</tbody>
</table>

Ablative

<table>
<thead>
<tr>
<th>Case Form</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>āt</td>
<td>asnāt</td>
</tr>
<tr>
<td>yāt</td>
<td>dūrāt</td>
</tr>
</tbody>
</table>

Locative

<table>
<thead>
<tr>
<th>Case Form</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>dūrai</td>
<td></td>
</tr>
</tbody>
</table>

Instrumental

<table>
<thead>
<tr>
<th>Case Form</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>tā</td>
<td></td>
</tr>
<tr>
<td>yāvatā</td>
<td></td>
</tr>
<tr>
<td>frādivā</td>
<td></td>
</tr>
</tbody>
</table>
### 21.1b. With suffixes

<table>
<thead>
<tr>
<th>Suffix</th>
<th>Meaning</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>-da</td>
<td></td>
<td>-dra</td>
</tr>
<tr>
<td>ada</td>
<td>aða</td>
<td>aðra</td>
</tr>
<tr>
<td>ida</td>
<td>iða</td>
<td></td>
</tr>
<tr>
<td>kada</td>
<td>kada</td>
<td></td>
</tr>
<tr>
<td>kuda</td>
<td></td>
<td>kuðra</td>
</tr>
<tr>
<td>yada</td>
<td></td>
<td>yadra</td>
</tr>
<tr>
<td>anayada</td>
<td>anayāda</td>
<td></td>
</tr>
<tr>
<td>hada</td>
<td></td>
<td>haðra</td>
</tr>
<tr>
<td>naida</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 21.2 Unanalysable adverbs

<table>
<thead>
<tr>
<th>Adverb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>adah</td>
<td>mašu</td>
</tr>
<tr>
<td>aura</td>
<td>manh</td>
</tr>
<tr>
<td>avar</td>
<td>nānā</td>
</tr>
<tr>
<td>āviš</td>
<td>nū</td>
</tr>
<tr>
<td>azdā</td>
<td>nūram</td>
</tr>
<tr>
<td>dbitā</td>
<td>rṣ</td>
</tr>
<tr>
<td>kā</td>
<td>uti</td>
</tr>
<tr>
<td>maš</td>
<td></td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>Prep.-prev.</th>
<th>Prep. only</th>
<th>Prev. only</th>
</tr>
</thead>
<tbody>
<tr>
<td>abi</td>
<td>hacā</td>
<td>apa</td>
</tr>
<tr>
<td>antar</td>
<td>?hada</td>
<td>fra</td>
</tr>
<tr>
<td>?anu</td>
<td>hanar</td>
<td>ham</td>
</tr>
<tr>
<td>api</td>
<td>mat</td>
<td>ni</td>
</tr>
<tr>
<td>aua</td>
<td>parā before</td>
<td>niṣ</td>
</tr>
<tr>
<td>ā</td>
<td></td>
<td>us</td>
</tr>
<tr>
<td>pari</td>
<td></td>
<td>vi</td>
</tr>
<tr>
<td>pati</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>parā away</td>
<td></td>
<td></td>
</tr>
<tr>
<td>?arārah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>?upa</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Connectives
-ça
vā
ula

24. Negations
nait
naida
mā

25. Emphatic (etc.) particles
bā
cana
cil
tū
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).

<table>
<thead>
<tr>
<th>Present</th>
<th>Aorist</th>
<th>Perfect</th>
</tr>
</thead>
<tbody>
<tr>
<td>ath.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>tot.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>root</td>
<td>A-M</td>
<td>A-M</td>
</tr>
<tr>
<td>red.</td>
<td>A-M</td>
<td>A-M</td>
</tr>
<tr>
<td>nas.</td>
<td>A-M</td>
<td>A-M</td>
</tr>
<tr>
<td>them.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ind.</td>
<td>22-7</td>
<td>4-6</td>
</tr>
<tr>
<td></td>
<td>6-4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>imf.</td>
<td>8-4</td>
<td>8-0</td>
</tr>
<tr>
<td></td>
<td>6-1</td>
<td></td>
</tr>
<tr>
<td>inj.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

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 ə. The particle is certain for 30.2a avaeñatā, which is an imperative, lā vaimatali. It is also assumed for acistā 51.11c, ajën 48.10b and anasat 53.7c.
The following cases remain:
/a/aram/ 43.10, written ārm. Here too /ā/aram/ has been assumed, but it would be the only occurrence of ā with ar-.
/vi adarsam/ 45.8b.
/arswālam/ 30.3a
/arsu(Ī)dam/ 32.3c. (Here a glide between -Ī s- has been assumed, as the verse is too long.)
/amahmadīl YH 35.7
/avācīl YH 36.6.
/avaučāmal YH 38.5. Uncertain.

From ah- be:
/a/as/ 31.9a, written as;
/āhuval 29.5a, written ahval. Uncertain.

The verb ah- had no injunctive forms in Indo-Iranian. Therefore ahval will be /āhuval 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 : /a/as/ he was;
second as: read /a/xratuš/ of great determination;
34.8a and c : /as/ 3 sg. inj. aor. of 2ah- throw;
34.8b : read /a/xraउāhl of great strength.

Thus both cases of augment before a root beginning (apparently) with a vowel (a-), had /a/a...l, i.e. /a/as/ and /a/aram/.

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-, vavāz-l, /yat/-from /yat-l.

If this consonant is a velar, the reduplication has a palatal (as PIE had e or i as reduplicating vowel): /e/a/n-, cikait-, jigrz-, cix/i/nuša-/.

If an original stop has become a fricative, the reduplication has the stop: /pa/^/-, cix/n-, cix/i/nu/-.

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 r- after i-:
/si-rāy- < *si-sāy-, /hiša-/ < *si-sd-so.
The vowel

The reduplicating vowel is \( a, \bar{a}, i, \) or \( u \) (for the intensives see below). The desideratives have always -\( i- \), even if the root has \(-u-\) (where Sanskrit reduplicates with \(-u-\)): \( /cix\bar{s}nu-/ \). 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. \( /cikait-, hi\bar{s}y-/ \)

Instead of \( a \) sometimes \( \bar{a} \) is found. This \( \bar{a} \) is also found in Sanskrit, but not always. No rule has been established. In some cases it may not be a linguistic reality.

In \(*hi\bar{s}la-\) (\(*si-stH-a-\) the -\( i- \) disappeared and a form \( /x)\bar{s}la-/ \) 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: \( /uz-\bar{r}\bar{d}ya\bar{i}/ \ [\bar{r}\bar{r}] < *-Hi-Hr- \) (root \( ?ar/?r < *Har/Hr). \)

The laryngeal is also preserved in \( /\bar{r}r\bar{s}ya-/ /[\bar{r}r]\bar{\bar{r}}ya-\), where the root began with a laryngeal before consonant.

In the forms where the root has zero grade, normal reduplication gave a long vowel:

- \( *Ha-Hr > /\bar{a}r\bar{i}/ \)
- \( *Hi-Hr-\bar{a} > /\bar{i}r\bar{a}-/ \)

\( ia- \) is interpreted as \( /i\bar{s}a-/ \), the desiderative of \( /\bar{i}- / \) go’. This would require \( *Hi-Hi-so- \), which would probably have disyllabic \( /\bar{r}i\bar{s}a-/ \), which the metre does not allow. If it was the desiderative of \( j\bar{a}- \) ‘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 + \( a \).

\( C_1^{a}R-C_1^{a}R(C) \quad \text{zau-:} /zau-zau-/; \text{dais-:} /dai-dais-/ \)

\( C_1C_2^{a}-C_1C_2(a)C \quad \text{prah/-:} /\bar{r}a-\bar{r}\bar{s}-ya-/ \).
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:

<table>
<thead>
<tr>
<th>Active</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>ath.</td>
<td>them.</td>
</tr>
<tr>
<td>prim.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>mi</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>hi</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>ti</em></td>
</tr>
<tr>
<td>du 1.</td>
<td><em>vahi</em></td>
</tr>
<tr>
<td>pl 1.</td>
<td><em>mahi</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>θa</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>anti, ati?</em></td>
</tr>
<tr>
<td>sec.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>am</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>hl/slš</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>tiθ</em></td>
</tr>
<tr>
<td>du 1.</td>
<td><em>va</em></td>
</tr>
<tr>
<td>pl</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>ma</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>la</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>an, at</em></td>
</tr>
<tr>
<td>sub.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>ā(ni)</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>ahi</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>at(i)</em></td>
</tr>
<tr>
<td>du 3.</td>
<td></td>
</tr>
<tr>
<td>pl</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>āma</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>āba</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>an(t)ī</em></td>
</tr>
<tr>
<td>opt.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>yaʔam</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>yāh YH</em></td>
</tr>
<tr>
<td>3.</td>
<td><em>yāi, īt</em></td>
</tr>
<tr>
<td>pl</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td><em>yāma, īma</em></td>
</tr>
<tr>
<td>2.</td>
<td><em>yātā</em></td>
</tr>
</tbody>
</table>
THE VERB

Active

1 sg. Ath. prim.: sec. *-mī: *-aṃ (after consonants). *-aṃ is *-a < *-ṃ enlarged with postvocalic *-m (which does not occur in Gathic).
  Them. *-ā(mi): *-am. *-ā continues PIE *-ṃ, *-mi (after *-s) was added from the athematic forms; *-am is from *-o-m.
2 sg. ath. *-hi: *-h (with *s or *f for *h according to the preceding sounds) < *-si: *-s.
  Them. *-ahi: *-ah from *-asi: *-as, for PIE *-shī: *-es.
3 sg. ath. *-ti: *-t (or *s < *-t); them. *-tī: *-t for PIE *-e: *-et.
1 du. ath. *-vahi: *-va. *-vahi < *-vasi, where *-i is a PII addition.
1 pl. ath. *-mahi: *-ma, them. *-āmahī: *-āma. The *-i is a PII addition.
2. pl. ath. *-thā: *-ta, them. *-tha: *-ta. *-thā represents PIE *-thī.
3 pl. ath. *-anti, *-ati?: *-an, at < *-enti, *-ṇi: *-ent, *-ṇt. The zero forms are found in the reduplicated presents, the intensives and the s-aorist. (*-ati in /vaiwīdaitə/ 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. -māi/-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 *-th₂s; the forms with *s- are based on the active ending.
3 sg. ath. *-tai, *-ai: *-ta, them. *-atai: *-ata. *-ai in /īšai/ 50.1a.
1 du. ath. *-vadī, them. *-vā. PIE *-vedh₂.
3 du ath. *-ātam, them. *-ālāi: *-ālam. Sanskrit has ath. *-telātām, them. *-tel-etām. The prehistory of these forms is unknown. (*-ālāi in sub. /jamaical/44.15c, *-ātam in /a)sruvātam/ 30.3a, *-ātam in /jasaical/ 30.4a.)
1 pl. ath. *-madai: *-mādi, them. *-mādai: *-mādi. *-mādi < *medhh₂, *-ai after the singular.
2 pl. ath. *-dvai: *dvam, them. *-advai: *advam. PIE *-dhīye.
3 pl. ath. *-atai: *ata, them: *antai: *anta. PII *nta replaced PIE *ro.

The imperative endings

<table>
<thead>
<tr>
<th>Act.</th>
<th>ath.</th>
<th>them.</th>
<th>Middle</th>
<th>ath.</th>
<th>them.</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg 2</td>
<td>-di, (-i)</td>
<td>-a</td>
<td>-hva, -sua</td>
<td>-ahva</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>-tu</td>
<td>-atu</td>
<td>-ām</td>
<td>-ātam</td>
<td></td>
</tr>
<tr>
<td>pl 2</td>
<td>-ta</td>
<td>-ata</td>
<td>-dvam</td>
<td>-advam</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>-ntu</td>
<td>-antu</td>
<td>-aniām</td>
<td>-aniām</td>
<td></td>
</tr>
</tbody>
</table>
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, -ala.
3 pl. ath. -niu, them. -antu.

Middle

2 sg. ath. -hva (-sva, -sva), 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. -aniām.

Passive

There is only one specific passive form, the 3 sg. aor. in -i. In origin this is probably a neuter 1-stem.

The perfect endings

Only the indicative had specific endings. There is no primary: secondary opposition.

<table>
<thead>
<tr>
<th>Active</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Act. 1 sg. -a</td>
<td>1 pl. -ma</td>
</tr>
<tr>
<td>2 -θa</td>
<td>3 -a</td>
</tr>
<tr>
<td>3 -ar, -rš</td>
<td>3 sg. -ai</td>
</tr>
</tbody>
</table>

Active

1 sg. -a, PIE -h2e.
2 sg. -θa, PIE -th2e. (Note -θa > -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 *-r or *-ēr, /-ar/ must represent *-r, 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
1. ahā-, tavā
   ayāni, varāni
2. ahat, dadat,
   ayat, mravat, vasat;
   ahati, mravati
3. ahati, dadati

Middle
1. ahu, iavā
   ayāmi, varāni
2. darat, daPati, dadat,
   ayat, mravat, vasat;
   ahati, mravati
3. ahati, dadati

THEM. PRES.
Active
1. iṣaPā, xṣawapā
   hanaPāni, sanhaPāni, usyāni?
2. iṣarat
3. raPāraPā, YH urvyāPāPāPāPāPā

Middle
1. prsaPāi, manyaPāi, śyaPāi, jasa, yazāi
2. prsaPāi, manyaPāi, śyaPāi, jasa, yazāi
3. iṣarat

YH is(aPāPāPā)

ROOT AOR.
Active
1. jamā, hacā, yaujā;
   darsāni, carāni
2. daPāhi
3. ahat, ardat, buvat, caidat, dapat, darsat,
   jamat, gapat, carat, maidat, *nasat,
   paPāt, rādaP syazdat, xraudat;
   buvati, daPati, jamati,
   carati, mardati
   xrapati xraudati
1. daPāma?
2. cayaPā, zayaPā
3. daPān, jaman
   buvanti, danti?, rādanti
3. du

Middle
1. isā, frināi, isāi
2. urnavatāi
3. daddantāi

Middle
1. aojāi, frināi, isāi
2. urnavatāi
3. dadantāi

Middle
1. prsaPāi, manyaPāi, śyaPāi, jasa, yazāi
2. prsaPāi, manyaPāi, śyaPāi, jasa, yazāi
3. iṣarat

YH is(aPāPāPā)

Middle
1. manāi
2. daPānāi
3. caidatāi, daPātai, yamātai

Middle
1. daPādvai
2. arantai, daPāntai
3. yaujantai, vaxsantai
4. jamailai
s-AOR.

Active
1. daisa, varsha
2. rahahani
3. naisat, stahati,
   vraxhat, vanhat;
   baxhati?, jan-
   hati, vanhati,
   varhati
1. nasdma
3. xsnauqan, YH vanhan;
   varqanti

a-AOR.

1. fraqai, hanapeni, vaucqa
3. vaucqapat
1. vaucqapa

PERF.
1. vaidat?
2. pl. vaavrazaqa

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:

<table>
<thead>
<tr>
<th>ath. pres.</th>
<th>them. pres.</th>
<th>root aor.</th>
<th>s-aor.</th>
<th>a-aor.</th>
<th>tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>active</td>
<td>17</td>
<td>9</td>
<td>36</td>
<td>14</td>
<td>81</td>
</tr>
<tr>
<td>middle</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>33</td>
</tr>
</tbody>
</table>

|             |             |           |        |        | 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 da- the subjunctive forms have /dqa/-: /da?ahi, da?ama/ etc. Not clear is azaq 50.7d (for *zaq /zaq?/).

The only exception is /danti/ < *dH-anti. The reduplicating presents have zero grade: /dadal/ < *da-<H-at, /dad, dadantai, zanzanti/, the n̄a-
The verb presents: /frināī/ < *-nH-āi, but /krnavan/, and /wr-n-av-a-ail/, if /wormvaitē/ 31.17a must be so read. In the reduplicated presents the type is old.

Irregular is /tāhāma/ we shall be; it must be a mistake for /lahāma/. In /urvāxāt/ 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- > -a?a-.

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, /jasāī/, /yazāī/, /ufyānil/, for which no explanation has been found. (One could emend to /ufya?a/, without -ni.) It is clear that the athematic verbs do not have the thematic ā, as in LA v., because it was disyllabic a?a. See IV 53.3.

The Endings

The distribution of primary and secondary forms is largely the same as in Sanskrit.

<table>
<thead>
<tr>
<th>Gatha-Avestan</th>
<th>Sanskrit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>Middle</td>
</tr>
<tr>
<td>1. -ā 10</td>
<td>-āi 19,</td>
</tr>
<tr>
<td>-āni 6</td>
<td>-ānai 3</td>
</tr>
<tr>
<td>2. -hi 1</td>
<td>-hai 1</td>
</tr>
<tr>
<td>3. -ti 19</td>
<td>-tai 8</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. -ma 4</td>
<td>-madai 1 YH</td>
</tr>
<tr>
<td>2. -tha 2</td>
<td>-dvaï 1</td>
</tr>
<tr>
<td>3. -niti 6</td>
<td>-ntai 7</td>
</tr>
<tr>
<td>1. du.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>-aitai 1</td>
</tr>
</tbody>
</table>

There are no differences between the different present-classes and the aorist types. (In LA v. 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 LA v.). In the Rigveda -nta is more frequent than -nte.
2 sg. The one form in */hi/ does not allow conclusions (LAv. has *-ō, -ā < *-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. Gothic 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):

<table>
<thead>
<tr>
<th>PIE prim.</th>
<th>PIIr. sub.</th>
<th>PIE sec.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-ōhi</td>
<td>&gt; -ā</td>
<td>-om</td>
</tr>
<tr>
<td>-ēhi</td>
<td>-ēs</td>
<td>-om</td>
</tr>
<tr>
<td>-e</td>
<td>-ēt</td>
<td>-om</td>
</tr>
<tr>
<td>-ōnom</td>
<td>-ōma &lt;</td>
<td>-omo</td>
</tr>
<tr>
<td>-ēthiē</td>
<td>&gt; -ath</td>
<td>-ete</td>
</tr>
<tr>
<td>-o</td>
<td>-an &lt;</td>
<td>-ont</td>
</tr>
</tbody>
</table>

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. *-ē 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 */ail/ from the 1 sg., which had *-a- with i-<*-h2 (the 1 sg. middle ending). On the origin of -āi see IV 53.3.

6. The optative

The optative is made with the suffix yāli, PIE ieh1/ih1, and secondary endings. With the thematic vowel the suffix gave -ai-.

The following numbers are found:

<table>
<thead>
<tr>
<th>ath. pres.</th>
<th>them. pr.</th>
<th>root aor.</th>
<th>s-aor.</th>
<th>a-aor.</th>
<th>pf.</th>
<th>tot.</th>
</tr>
</thead>
<tbody>
<tr>
<td>act.</td>
<td>11</td>
<td>8</td>
<td>14</td>
<td>0</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>mid.</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The preference 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 /varzima/).

The forms are in the table.

**Optative (all forms)**

<table>
<thead>
<tr>
<th>ATH. PRES.</th>
<th>THEM. PRES.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active</strong></td>
<td><strong>Middle</strong></td>
</tr>
<tr>
<td>1. hyām</td>
<td>xšnavīša</td>
</tr>
<tr>
<td>2. hyah YH</td>
<td>rapaiš YH</td>
</tr>
<tr>
<td>3. hyāt, mruyāt, usyāt, mrušyāt; pāyāt; dadīt, sāhīt</td>
<td>frādait, jasait, vardayaita</td>
</tr>
<tr>
<td>1. hyāma</td>
<td>sravayaima,</td>
</tr>
<tr>
<td>2. hyāla</td>
<td>vanaima, zarnaima,</td>
</tr>
<tr>
<td><strong>ROOT AOR.</strong></td>
<td><strong>a-AOR.</strong></td>
</tr>
<tr>
<td>1. dyām</td>
<td>dihaya</td>
</tr>
<tr>
<td>2. jamyāh YH</td>
<td>dihau</td>
</tr>
<tr>
<td>3. dyāt, dāyāt, asyāt3, jamyāt, mshyāt, sahyāt,4</td>
<td>sishait</td>
</tr>
<tr>
<td>1. buyāma YH, jamyāma YH, manimadi YH, āpaima YH, vavaraimadi</td>
<td>xshaita YH</td>
</tr>
<tr>
<td>2. varzima YH, zaima YH</td>
<td>vaucaima YH</td>
</tr>
</tbody>
</table>

**PERFECT**

1. 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.

---

1. dya, 43.8d; 2. *dH-iH-a  
2. *dH-iH-i, sI  
3. frōyāt 46.8b; nas- attain  
4. sahyāt; sanh-
The middle has always -i- 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. /jamyā/ has am < ʏ. The exceptions are /dāyā/ (6 times) which stands beside /dyāl/ (twice), and /pāyā/ (46.8e). /dāyā/ is a younger form, with dā-introduced to replace the zero grade. The old and the new form occur side by side. (Skt. deyām has -ts -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 /dadi/, 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-mi), and because extension of -i- is improbable.

The present /sāhi/ with full grade of the root (sāh-, Skt. sās-, PIE *keHś-) 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 /cīti/ is aberrant in having zero grade of the root. In the 1 pl. full grade is well represented: /sraavīma, YH varzīma, zaima < *saH-iH-.

As the full grade of the root in the (proto)static type is also found in the middle, xšnauša could be /xšnauša/ (uv cannot be graphic for /uv/). /varīmadi/ can be *uH-iH- or *ueH-iH. Thus /manīmadi/ could have full grade man-, but it could also be man- < mg- (in other positions).

Both /dyamal/ and /hyamal/ are disyllabic. They have -yaamal < -yaHm.

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 injunctive 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):

\(|ah-| be, \text{/ah-}, \text{as-} /h-, s-/; \)
\(|i-| go, \text{/ai-}, \text{ay-} /i-, y-/; \)
\(|mru?-| say, \text{/mrau-}, \text{mrav-} /mru-, \text{mru?-} /; \)
\(|vas-| wish, \text{/vas-} /us-/; \)
\(|ši-| dwell, \text{/šai-} /išy-/; \)

Stems

The stems may be grouped thus:

<table>
<thead>
<tr>
<th>CaC</th>
<th>ah-</th>
<th>taš-</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>hac-</td>
<td>vah-</td>
</tr>
<tr>
<td></td>
<td>hah-</td>
<td>vas-</td>
</tr>
<tr>
<td></td>
<td>hap-</td>
<td></td>
</tr>
<tr>
<td>Cā</td>
<td>pa?-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CaCC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>sāh-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>rāθ-</td>
<td></td>
</tr>
<tr>
<td>CaR</td>
<td>bar-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CaRC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>garz-</td>
<td></td>
</tr>
<tr>
<td>CaN</td>
<td>jān-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CaNC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CiC</td>
<td></td>
</tr>
<tr>
<td>Ci(H)</td>
<td>i-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ši-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>īs-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>dviš-</td>
<td></td>
</tr>
<tr>
<td>Cu(H)</td>
<td>mru?-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stu-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>tu?-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>xšnu-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CuC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>auj-</td>
<td></td>
</tr>
</tbody>
</table>

(-C is not H or resonant)

1. Roots CaC
   \(|ah-| be, \text{/as-}, \text{ah-}, s-, h-/ (Skt. \text{as-}, \text{āsmi}); see paradigm. \)
   \(|hah-| sleep, (\text{sas-}, \text{sāsti}); \text{hahmīl} 34.5a. \)
   \(|hap-| hold, (\text{sap-} serve?, \text{sāpati}); \text{hafṣī}, \text{haptiil}. \)
   \(|taš-| shape, (\text{takṣ-}, \text{tāṣṭi}); \text{tāṣil.} \)
   \(|vah-| dress, (\text{vas-}, \text{vāste}); \text{vastail}. \)
   \(|vas-| wish, (\text{us-}, \text{vāsī, vāsmi}); see paradigm. \)
2. Roots Cā
   \(|pa?-| protect, (\text{\text{pā-}}, \text{pāti}); \text{pāl, pāra?}, \text{pāyāl}, \text{ind. M} \text{\text{pāhāi}l.} \)
3. Roots CaC
   \(|rāθ|-?| cling/to\', (\text{\text{-}}); \text{\text{rāstil.}} \)

(continues on p. 164)
**THE VERB**

Root present, active; all forms (static forms in brackets)

| ind. 1. | ahmi  | vasmi | mraumi | hahmi, (stāumi?) |
| ind. 2. | ahi   | vaśi  |  | hafṣi |
| ind. 3. | asti YH | vaśiti | aiti | haptī, šaitī, (śāsti) |
| 1 du    | mahi YH | usvahi |  |
| 2. sta  | ushta |  |  |
| 3. hanti |  |  | yanti ſyanti YH, dvišanti |
| inf./inj. 1. |  |  |  |
| 2. aṛas  |  |  | mrauś pāt, jan, (tāṣṭ) |
| 3.  | āhva  |  | mrauta |
| sub. 1. | ahā- | ayāni | tavā |
| 2.  |  |  |
| 3. ahat | vasat | mravat | ayat pārāt? |
| sub. 1. | ahāma |  |  |
| 2.  |  |  |
| 3. ahan |  |  |
| opt. 1. | hyaḥam |  |  |
| 2. hyāk YH |  |  |
| 3. hyāt  | usyāt | mruyāt iyāt pāyāt, (sāhīl) |
| imp. 2. |  | zdi  | idi |
| 3. astu | mrautu | uṣṭa? |
| 3. hantu |  |  |

Root present, middle; all forms (static forms in brackets)

| ind.1. | mruṣai, grzai, (aujai) |
| ind. 2. | pāhai |
| ind. 3. | īṣai; (vastai) |
| inj.1. | (aujī) |
| inj. 2. | (augža) |
| 3. gržda, (augda) |
sub.1. īsāi, (aujāī)
1. īsāmadai YH
opt.1.
2. (xšnaviša)?

imp.

/lsāh-/ teach, /lsās-/, sāh- (šās-, šāsmi); /lsāsti, sāstu, sāhīl.
4. Roots CaR
/lanbar-1 bring, (bhr-, bhāratī); /lanbarul or /lanbaratul?
5. Roots CaRC
/lgrz-1 complain, /grz-1 (grh-, grheid); /grzai, grždal.
6. Roots CaN
/ljan-/ slay, /lanjan-, ja- (han-, hanti); /ljan/, inf. /ljadyāil.
7. Roots Ci(H)
/lī-/ go, /lai-, i-/ (ī-, ētā); see paradigm.
/lī-/ dwell, /līai-, ēj-/ (kṣī-, kṣēti); /lāiti, YH ęyantı.
8. Roots CiC
/līs-/ be able, (īs-, ēsö); /līsai, īsāi, īsāmadai YH/.
/ldbišt-/ hate, (dvıš-, dvěšī); /ldbıšantı/.
9. Roots Cu(H)
/lmrū-/ speak, /lmrav-, mrū-, mrav-1 (brū-, brāvīmi); see paradigm.
/lstul-/ praise, /lstul-/ (stu-, staumī AV); /lstūmı (or /staumı?)
/ltu2-/ be able, /ltu2-/ (tū-, tāvīti); /ltuavı
/lxšnu-/ satisfy, /lxšnaviš- (-); 2 sg. opt. M /lxšnavišal. (Perhaps root aorist.)
10. Roots CuC
/lauj-/ say, (ūh-, ōhate 3 pl.); see paradigm.

Notes

Active
2 pl. ϑ after s, ū becomes t; see IV 31.
3 sg. inj. The -t is lost after consonant: /lapan, 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 < *ght 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, -l). 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:

<table>
<thead>
<tr>
<th>pres.</th>
<th>aor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>/itaś- (takṣ)</td>
<td>/zaś- YH (hā; not stat.)</td>
</tr>
<tr>
<td>/vah- (vas-)</td>
<td>/var- YH (-)</td>
</tr>
<tr>
<td>/sāh- (sār-)</td>
<td>/ṣnu- (-)</td>
</tr>
</tbody>
</table>

All forms are given below.
Remarkable is /cikairāś/ 3 pl. ind. pf. of cit-.
Static forms of the root present and the root aorist

**Active**

<table>
<thead>
<tr>
<th>ind. pres.</th>
<th>aor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. stāumi?</td>
<td>aujai</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3. sāsti</td>
<td>vostai</td>
</tr>
<tr>
<td>1.</td>
<td>augmadai- YH</td>
</tr>
<tr>
<td>inj.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>auji</td>
</tr>
<tr>
<td>2.</td>
<td>-augža</td>
</tr>
<tr>
<td>3. tāśi</td>
<td>augda</td>
</tr>
</tbody>
</table>

**Middle**

<table>
<thead>
<tr>
<th>pres.</th>
<th>aor.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>aujāi</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>augāi</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>augāi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>opt.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>xšnaviša?</td>
</tr>
<tr>
<td>3. sāhit</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>sravimā,</td>
</tr>
<tr>
<td></td>
<td>varzīma YH,</td>
</tr>
<tr>
<td></td>
<td>za(?)īma YH</td>
</tr>
</tbody>
</table>

imp. | 2. | 3. sāstu |
72. Reduplicated presents

Stems

1. Roots in -a?
/dad/- give, put, /dadā/-, /dad/- (d(h)ā-, dād(h)āiti); see paradigm.
/mimā/- determine, /mimā/- (mā, māmīte); 2 pl. mimātā 32.4a. If this form is indicative, it must stand for /mimā/ā. If the -a is short, it must be a subjunctive, or a thematic indicative.
/za/- come in first, /zaz- (hā-, jāhāti); 3 pl. /zazal/, sub. /zazantil/.

2. Other roots.
/danh/- teach, /didanh-, /didah- (-); 3 sg. inj. /didans/, 1 sg. ind. M. /didahail/.
/di/- see, /dady- (dhē, ádīthē); 3 pl. inj. /dadyatl/.
/garz/- complain, /jigrz- (gēth, -); 3 pl. jigrzatl/.
?/hac/- accompany, /hič- (sač-, stšakti); sub. /hičamadai/ YH 40,4 (written with short -a-); if the form is ind., it is thematic.
/ar/- rise, /iarpa-/ (rō, ʾyartī, ʾrtē); inf. /iarpayāl/ < *Hi-Hr.
/rud/- hold back, /ruaurda-/ (rudh-, -); /ruaurstl/. Or pluperfect? See §10.
/yā/- ask, /iar- (ʾamahe); 1 sg. ind. /iayai/31.2b, imp. /iayam/. If the root was *HiH-/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, /iara-/; imp. /iara/ 53.8d, from *Hi-Hr-a-.
/mā/- determine, /mima-/ if /mimā/ā is ind.; see above.
/stā/- stand, /xšta-/ (sta-, tištāti); inj. /xšatal/ 51.4a. /xšta/- stands for *hišta- with loss of the -i-.

Reduplicated presents (all forms)

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Gathic

Active

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Middle

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Gathic

Active

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Middle

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Gathic

Active

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Middle

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>

Gathic

Active

<table>
<thead>
<tr>
<th>Sanskrit</th>
<th>Middle</th>
<th>Active</th>
</tr>
</thead>
<tbody>
<tr>
<td>dadāi, tāi, didahai</td>
<td>dadai, tāi, didahai</td>
<td>dadhāmi, dadhāsi, dadhāti</td>
</tr>
<tr>
<td>dādai, dāstai</td>
<td>dādai, dāstai</td>
<td>dadhāsi, dadhmāsi, dadhāti</td>
</tr>
<tr>
<td>mimātha?</td>
<td>mimātha?</td>
<td>dhatta</td>
</tr>
<tr>
<td>yāyā</td>
<td>yāyā</td>
<td>dādhati</td>
</tr>
</tbody>
</table>
THE VERB

sub. 1. dadhāni
2. dadhas
3. dadhat
1. dadhāma
2. (dadāmahe)
dadhatē

opt. 1. dadhan
2. dadantai
3. dadat

imp. 1. dadhit
2. dadīta
3. (dadyāt)
dadhīta

inf. 1. dadit
2. dadita
3. (dadīran)
dadhita
dadhimahi

Notes

Active
The 3 pl. has */-at(i)/ < */-at(i). Avestan has no r-ending for this form.
The subjunctive has zero grade of the root: */da-\(d\)(h)A-t."
On */dadīt/ see on the optative, §6.

Middle
*/dastai/ is from */da-\(d\)H-tai > */daitai > */dai(t)i, and */dazdai/ from
*/da-\(d\)H-tai > */da(d)zθai > dazdai. (In Sanskrit the Bartholomeac-form
was analogically replaced.) If */dH- resulted phonetically in */dh-*, */d- must
have been restored.
Imp. */dasva/ is from */da-\(d\)H-sva > */datsva (*/da-\(d\)H-sva would have
given */dadzva > */dzva). Thus */da-\(d\)(h)H-\(d\)hvam > */\(d\)(d)z\(d\)vam.

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 */frin-/, if the */i- is really long (hunāitī might
have */hūn-/).

The full grade in the plural (injunctive) */db(a)naual/ has parallels in
Sanskrit, ákrṇota beside more frequent forms in */-nuta.*
Stems

1. Stems in -nu
- /ci-/ choose, /cinau-/ (-); /cinaut/, /cinvant-.  
/ldbu-/ deceive, /ldbh(a)nau-1 (dabh-, dabhnuhi); 2 pl. inj. /dbhnuotā
/ldbh(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 /lā < ā > dbhnuotā. Sanskrit introduced the full grade dabh-.

/lkar-/ make, /krnau- (kṛ-, kṛnāvan); 3 pl. sub. /krnavan/.
/lspas-/ look upon, /lspaṇu- (-); /lspaṇuṭal.
/lsvr-/ hear, /lsnv- (śrṇūṭī); /lsnvant- YH.
/lvar-/ turn, /lrvnau- (-); 3 sg. sub. /lrvnavaṭai/ 31.17a. The text makes it probable that the form is subjunctive, which would have been /-nvatai/, but the writing vyraṇvaitē is against this reading. Also /-nvatai/ cannot be (3 sg.) indicative.

2. Stems in -nā
/lfrn/ please, /lfrn-, /frīnan- (pri-, priṇāṭi); 1° sg. subj. /lfrīnāi/, YH /lfrīnanmahīl, see II 13.5. (The participle /lfrīnamna-/ is thematic.)
/lhū-/ urge, /hūnā-, hūṇa- (sū-, -); /hūnāṭi/, YH /hūṇanmahīl (see II 13.5).
/lvar-/ choose, /lvrn-/ (vṛ-, vṛṇīṭī); /lvrnai, lvrnai, lvrnata/.
/lzn-, xṣnā-/ get to know, /lṣān-/ (jña-, jāṇīṭā); 2 pl. imp. /lṣānta/ 29.11b. The form is written zāṇata, but the verse is one syllable too long; from *nH-ta we expect /-nta/.

3. Stems in -n(a)G-
/lci-/ teach, /lcinas-, ciś- (-); 3 sg. inj. /lcinas/ 44.6d, /lciśdīl/, YH /lciśmahīl.
/lciś-/ resulted from *cins-.
/lciṭ-/ recognize, /lcīṇaṭ- (cit-?); 3 sg. inj. /lcīnas/ 32.5c.
/lmarc-/ destroy, /lmrc-1 (mrca-, -); 2 pl. M. /lmrgdvaṭi/, 3 pl. /lmrcatai/, opt. 
/lmrṣyāṭi/ with cy > ỵ, inf. /lmrgdyaṭi/.
/lmarz-/ destroy, /lmrṇ- (-); inf. /lmrṇḍyaṭi/.
/lmiz-/ ?, /lmīnaṭ-, miz- (-); 2 sg. /lmīnaṭ, mizan/.
/lvid-/ find, /lvinad-/ (vid-, cf. vindāṭi); /lvinastī/.

4. Stems of these types have been thematized:
/lmrnda-/ neglect, from /mrld-/.
/lprn-/ fill, from /par-/ for *pr-ṇ-aH-
/la(al)rna-/ make, be angry, from /zar-/ for *zr-ṇ-aH. Opt. /lu(al)rnāmal/
The form is written zaran-; which makes the verse one syllable too long.
-ar- may be due to influence of other forms (influencing *zrṇ-), or stand for -ar- with -ar- from -ṛH- before consonant secondarily introduced.
Nasal presents (all forms)

**Active**

- **ind.** 3.
  - 1.
  - 2. *spašnuma*

- **inj.** 2.
  - 3. *cinaut*
  - 2. *db(a)nauta*
  - 3.

- **sub.** 3.
  - 3. *krnavan*

- **opt.** 3.

- **imp.** 2.
  - 2. *zänla*

- **ptc.**
  - *cinvant-, srnvant- YH*

**Middle**

- **ind.** 1.
  - 3. *vrnai*
  - 2.
  - 3.

- **inj.** 3. *vrnata*

- **sub.** 1.
  - 3. *frīnāi*

- **inf.**
  - 3. *vrnavatai*

- **ptc.**
  - (frīnmana-)

8. The thematic present

**Stems**

1. Root presents

1a. Full grade of the root

- *arg-ā* be worth (ārhati)
- *ava-ā* help (āvati)
- *bara-ā* bear (bhārati)
- *bada-ā* be aware (bōdhati)
- *bava-ā* be (bhāvati)
- *daava-ā* be (?)
- *daixa-ā* reveal (?)
/dbanza-/* consolidate, support (*bamhate?)
/dvāra-/* dvāra- hurry (-)
/frāda-/* increase, further (-)
/haca-/* follow (*cācate)
/huāra-/* xuāra- take an oath? (-)
/mara-/* recite, keep in mind (*mārati)
/mrauca-/* sink (*mrācati)
/nada-/* cry (*nādati)
/rāpa-/* support (*rāpati)
/sanja-/* announce (*sāmsati)
/sāra-/* sāra- unite (-)
/śyava-/* activate (*cyāvati)
/ḍuaya-/* frighten (-)
/uda-/* carry, lead? (-)
/uda-/* find (-)
/vana-/* overcome (*vānati)
/vāpa-/* vāpa- scatter, snatch away, cut down (*vāpati)
/varda-/* grow (*vārdhati)
/uaśda-/* lift, raise (*vādayati)
/xrausa-/* scream (*krōśati)
/yaza-/* adore (*yājati)

It is not known why some forms have a long ā; it may be only graphic.

1b. Zero grade of the root
/iśa-/* set going (iśe)
/mṛda-/* be merciful (-)
/sprza-/* strive (*sprhāyatī)
/visa-/* be prepared (viśāti)

With reduplication
/iṭa-/* rise (imf. āirat); iṭarat/* 53.8d.
/xśla-/* stand, from *hiśla-

2. Original nasal presents
a. With roots in stop
/mṇda-/* destroy (mārdante)

b. With roots in laryngeal
/frīna-/* dedicate oneself; please (*pṛnāti)
/prṇa-/* fill (*pṛnāti)
/izrna-/* be angry (*hṛnīle)

3. With suffix -ya-
   a. With zero grade of the root
/ḍīya-/* undertake? (*divyati?)
THE VERB

/drúya-/ deceive (drúhyati), in /adrujyant-/
/dbíšya-/ be at enmity (dviš-)
/dya-/ distribute (dyáti)
/dya-/ bind (dyáti)
/išya-/ urge (išyati)
/kāya-/ desire (kāya-)
/manya-/ think (mányate)
/pišya-/?
/siždya-/ retreat (-)
/sya-/ cut (clyáti)
/ufya-/ sing, eulogize (-)
/ušya-/ grow (uksá-, uksa-)
/vašya-/ totter (root vanac-), see 12.1.
/vutya-/ work (-)
b. With full grade of the root
/ansya-/ attain (-)
/nasya-/ disappear (náyati)
/sašya-/ learn (sáknóti)
/spasya-/ look, perceive (páyati)
/bráya-/ protect (tráyati)
With reduplication
/ižya-/ desire, *Hi-HH̱gh-, root āz- (ḥate).
For the denominatives with -ya- see §14.

4. Suffix -aya-

a. with zero grade
/išya-/ prosper (išyati); ptc. /išyant- 50.9d.
/rudaya-/ lament, root rud- id. (rodáyati); 3 sg M /rudayatal 44.20d
/rupaya-/ cause pain ?, rup- break (ropayati); /rupayantil 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
/xšaya-/ rule, xšā- id. (ksáyati); /xšayahil etc.
/zaya-/ win, from *zH-aya-, zā- id.; /zayahal 53.7d. (Or sub. aor. of zi-)
/zuʔaya-/ call, from *zuH-aya- < *gHhuH-ejo-, root zu- id. (húyati); 1 sg /zuʔayal, /zuʔayantil ptc. dat. sg.

b. with full grade. This had PIE ə, 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
/šānaya/- make ill, /bānaya/- fall ill (-); /bānayan/.
/mānaya/- resemble ( < make one think of), man- think (/mānayati/);
/mānayati/ 49.2a.
/saucaya/- kindle, sue- burn (/sucāyati/); /sacaya/ 32.14c.
/srāvaya/- make heard, su- hear (/srāvāyati/); opt. /srāvayaima/ 49.6c.
/uxūnaya/- make grow, uxū-/vaxū- (uxūsāyati/); in /tārta-uxūxyant/- 33.9a.
/vardaya/- cause to grow, urd- grow (/vardhāyati/); opt. M. /vardayaita/ 50.3c
YH /vālaya/- inspire, val- understand (/vātāyati/); /vātayāmahī/ 35.7, /vātayatul/ 35.6.
YH /vaidaya/- make known, vid- know (/vedāyati/); /vaidayāmahī/ 36.6, 41.1.
b2 non-causatives
/dābaya/- deceive, dab- id. (cs. dambhāyati/); /dābayati/ 43.6e.
/dāraya/- hold, dar- id. (dhārāyati/); /dāraya/ 32.1c, /dārayati/ 31.7b.
/daxūnaya/- teach, daxū- id.(-); /daxūya/ 33.13c.
/dbānaya/- delude, dbu- id. (-); /dbānayati/ 31.17b.
/rāhaya/- alienate, rah- id. (-); /rāhayan/ 32.12a.
/rāsaya/- damage, rās- id. (-); inf. /rāsahāyat/ 49.3b, 51.9c.
/sauvaya/- save, sū- id. (-); /sauvah/ 51.9c.
/varzaya/- be effective, urz- work (-); /varzayantah/ 45.4c. The form has also
been considered as a denominative.

5. Suffix -sa-
   a. -sa- from *-so-
/baxūa/- distribute, bāj- (-); imp. /baxāhva/ 33.10b.
/mazdūha/- bear in mind (-); imp. /mazdahavana/ 45.1c.
/xūnauša/- satisfy; /xūnaušamnah/ 46.18d.
b. desideratives
   See §13.2.
c. -sa- from *-skel-, with zero grade of the root except those ending in -ā.
/īsa/- desire, īš- (icchāti); /īsā/ 1s opt. M. 43.8b.
/ījasa/- go, root gam- (gacchāti)
/īsā/- seek, īzā- (-):
/ŋsā/- wane, ņp- (-).
/prsā/- ask, prs- (prcchāti).
/yasa/- hold, yam- (yācchāti).
/yāsā/- long for, yā- (-).

6. Suffix -va-
/līvā/- live, lī- (līvati).
/rātvā/- pervade?, rīv(-).  
See under 8.
7. -va-ya- is found in /tarvaya-/ overcome, root tī-; /tarvāyama/ 28.6c. The form is often considered a Late Avestan intrusion, for *tarva-, Skt. āryati, because the verse is one syllable too long.

8. Quite isolated is /vaina-/ (vēnati).

Thematic presents, active (examples)

| ind. | 1. | /-āmi/ | avāmi |
|      | 2. | /-āl/ | īzyā, usyā, prsā |
|      | 3. | /-āhi/ | vainahi, ṭvayahi, xšayahi |
|      | 1. | /-āmahi/ | sanhāmahi, ījivāmahi, YH vātayāmahi |
|      | 2. | /-āθa/ | išaθa, sašyaθa |
|      | 3. | /-anti/ | maranti, YH vananti |

| inj. | 1. | /-ah/ | jasah, uxšyah, didržah |
|      | 2. | /-at/ | arjat, mθdat, prsат, jasat, dārayat |
|      | 1. | /-āma/ | tarvayāmā |
|      | 2. | /-ama/ | mrndan, vordan, bānayan |

| sub. | 1. | /-ārāni/ | sanhārāni; usyāni |
|      | 2. | /-ārā/ | xšaryaθa |
|      | 3. | /-ārat/ | išarat |
|      | 1. | /-āranti/ | išaranti |
|      | 2. | /-āran/ | rārrāyāran, YH urzyaθan |
|      | 3. | /-āranti/ | išaranti |

| opt. | 1. | /-aiš/ | rāpaθiš |
|      | 2. | /-aθal/ | frādaiθ, jasaiθ, išaiθ, vādayaiθ |
|      | 1. | /-aima/ | vanaima, zarnaima |
|      | 2. | /-aima/ | vanaima, zarnaima |
|      | 3. | /-aima/ | vanaima, zarnaima |

| imp. | 2. | /-aθ/ | rapa, vaina, prsā, uxšya, xšaya |
|      | 3. | /-aθal/ | īratu, YH urzyatu-, vātayatu |
|      | 2. | /-ataθa/ | vainata, jasataθa |
|      | 3. | /-antul/ | vainata, jasataθa |

1 see supra section 8
2 see under the subjunctive, §5
3 in the YH it cannot be verified if it was -aθa- or -ā-. 
Thematic presents, middle (examples).

ind. 1. /-ail/ īsai?, yasaì
2.
3. /-ail/ hacataì, yazataì, prsataì, manyataì
1. /-āmadai/ YH yazāmadaì, hiṣcāmadaì, visāmadaì
2. /-advai/ didrag̣zadvai
3. /-antai/ hacantai, frādantai

inj. 1.
2.
3. /-atāl/ didaršataì, manyataì
1.
2.
3. /-antal/ dvarantaì, manyantaì
3 du /-aital/ jasaital

sub 1. /-aṛaì/ ṣyavaṛaì, prsavaṛaì, manyaṛaì
/-aṛanai/
2.
3.
1. /-aṛāmadai/YH is(a)ṛāmadai
2.
3. /-aṛantai/ hacāṛantai

opt. 1. /-aya/ īsaya
2.
3. /-aita/ vardayaìta
1.
2.
3.

imp. 2. /-ahual/ baxṣahva
3. /-atāl/ urzyatām, dyatām
2. /-advam/ vaidadvam
3. /-antāl/ xrausantām

---

1 all these forms are written with short a.
2 on the forms with /-āil/ see on the subjunctive.
3 /aṛā/ or /a/ 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 /buva-/, Skt. bhūva-) have full grade, the other forms zero grade. The 1. and 2. pl. indicative active have often full grade in Sanskrit. In Gothic only one form is known, /qatal/, but it is now mostly interpreted as 3 sg. M. The only other relevant form is /caītal/, for which it is not evident that it is a 2 pl.

The root *gam-* has /jām/- in the optative, which is the normal development of *ṁ* 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 /cītīl/ for expected */caītīl/ or */cīyāt/.

The imperative has some full grade forms, as in Sanskrit. The Gothic material allows no conclusions, but that /gādil/ : /jantul/ must be old. The full grade forms of /ru/- have exact counterparts in Sanskrit: /srautul/- /srota/, /srautul/- /srota/.

/manimadi/ YH may have analogically introduced man-, to avoid /mṇimādi/.

In /arṣval/, written ṛaśvā, the full grade must be analogical (cf. Skt. opt. M arṣa). 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. /cārt/, /cara-1 (root kr-) and /jān, jama-1 (gam-) show that the root had e-vocalism, /yuvan/ that the ending was *-ent. In the thematic inflection the palatalized form has been generalized (type sācate), hence 1 sg. sub. /yaujāl/. On the opt. /jamyā/- see above.

Stems

The roots that have a root aorist are:

<table>
<thead>
<tr>
<th>CaC</th>
<th>ah-</th>
<th>hac-</th>
<th>nas-</th>
<th>vac-</th>
<th>grab-</th>
<th>xrap-</th>
<th>YH</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaCC</td>
<td>syazd- (sīzd-)</td>
<td>vaxš-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE VERB

| Ca? | dar-, ga?- | CaC | rād- |
| CaR | ar- | CaRC | ard- |
| dar- | | dars |
| kar- | | grab- |
| var-lock | | mard- |
| | | varz- YH |
| CaN | gam-yam-man-YH | CaNC | sanh- |
| Ci | ci-, zi- | CiC | ciš- |
| | | ciθ- |
| | | midθ- |
| | | guš- |
| | | yuj- |
| | | xrud- |
| Cu | sru- | CuC | |
| Cu? | bu?- |

/lah-/ throw, /lah- (-); /as, ahat/. Cf. §2.
/ar-/ rise, /ar-/ (r̥-, artal); /aram, arantal, aršval (all written with ār-).
/ard-/ flourish, /ard- (ʔrd̥-, ʔdhat); /ardat/.
/bu?-/ be, /bu?-/ (bhū-, ābhū); /buvati, YH buyāmal.
/či-/ separate, /cay-, ʔy- (-); 3 pl. inj. M. /ʃyata/, sub. /caʃaθa/.
/čiθ-/ promise, /caʃiš- (-); /caʃaθam, caš, caʃš, caʃšal. That /caʃša/ is 2 pl. A.
| is not clear from the text.
/čiθ-/ erkennen, /caθ-, čiθ- (-); /a)(ciθaθa, caθə, caθətaθ, caθθ?/. It has been
| objected that we expect *caθθa, but such ‘incorrect’ reshufflings do
| occur: instead of a ‘correct’ analogical *caθθə a form /caθθa/ may have
| arisen.
/dar-/ hold, /dr-/ (dhr-, dhrṭhās); /drta, dṛṭa/.
/dars-/ see, /dars-/ (dṛ-, adarsam); /darsam, adarsam, darsāni/.
/gam-/ go, /gam-, jam-, gm- (gam-, āgan); /jān, gman/, sub. /jama-/ opt.
| /jaṃyā-/, /gadś, jaṃtal (see paradigm).
/grab-/ grasp, /grab- (grabh-, āgrabham); /grabaml/.
| /guš-/ hear, /guš- (ghus-, -); inj. M. /guʃtal/.
/hac-/ follow, /hac, sc-/ (sar-, saćāna-); /scantul/.
/kar-/ make, /kar-, kr- (kr-, ākar); /cari, carani, carāi'i, YH /kṛśval/.
/man-/ think, /man-/ (man-, āmata); 2, 3 sg. inj. M. /manha, mantal/, sub.
| /manāil/, opt. /manimadil/.
/mard-/ neglect, /mard- (mrdh-, mṛdhṛś); /mardati/.
/midθ-/ rob; /maiθ-, midθ- (-); /maisi, maiθai, miθyāt/.
/nas-/ attain, /nas-, as-/ (as-, āsta, așyāt); sub. */nasati/ written nasat with unexplained q; /asyāt/ in frasyāt; 3 sg. inj. M. /lasta/ in frastā with unexplained a.
/rād-/ accomplish, /rād-/ (rādh-, sub. rādhat); sub. /rādat, rādantil/.
/sanāh-/ announce, /sah-/ (śāms-, -); /sahyāt/.
/sīzā-/ retreat, /syazd-/ (-); sub. /syazdal/.
/sru-/hear, /srav-, sru-/ (sru-, ásrīl); /sravīma, srauta, srauta, asru(z)dvam/, 3 du. /asruvātam/. The -z- must be from the enlarged root /sruš-./
/uvāc-/ speak, /uc-/ (vac-, -); 3 sg. imp. M. /ucām/.
/var-/ choose, /var-/ (vr-, ávṛta); /varta, varmadil/.
/var-/ lock in, ward off, /var-/ (vr-, ávar); /varāni, varśva?/.
/varz-/ work, /varz-/ (-); 2 sg. inj. YH /vārs, varzimāl/.
/vaxī-/ grow, /vaxī-, uxī?-? (ukś-, -); /vaxīti, vaxṣat, vaxṣantai; /uxītā/ 1 sg. opt M. in uxīyā 33.10c?
/xrap-/ be adequate, /xrap-/ (krp-, ákrpan); /xrapati/ YH.
/xrud-/ make afraid, /xraud-/ (krudh-, -); /xraudat(i)/.
/yam-/ hold, /yam-/ (yam-, sub. yāmat); 3 sg. M. /yantal, yamatal/.
/yuj-/ yoke, /yaug-, yug-/ (yuji-, ēyuji); /yaugt, yujan, yaujā, yaujantai/.
/zi-/ abandon, /zay-/ (-); sub. /zayabdal/. (Or present from zā-, *zHaya-.)

Inflection

Root aorist, active (examples)

ind./inj.

1. caiśam
2. caiś
3. yan yaugt maist caiśt
   2. caiśta?
3. gman yujan

sub.

1. jamā yaujā darsāni
2. jamat(i) maiṭat caiṭāt
3. jaman cayātha

opt.

1. jamyāh YH
2. jamyāt mīyāt cīṭī?
3. jamyāma srauṁa

imp.

1. gadi
2. jantu
3. srauta
4. 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 table gives all forms attested in Gathic. The third table gives all middle forms.

Note 3 pl. M. /śy-atā/. 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, cašam, (a)darsam, graham
2. as, caš varš YH
3. cart, cašt, jan, mait, vaxšt, yaugt
1. 
2. cašta?
3. gman, yujan
sub.
1. carāṇi, darsāṇi, jaman, varāṇi, yaupā
2. 
3. ardat, ahat, buvat(i), cašvat, carat(i), darsat, jamal(i), mašt, mardat, *nasat, rādat, syazdat, xrapati, xraudat(i)
1. 
2. cašaṭa, zayaṭa?
3. buvanti, jaman, rādānti
opt.
1. 
2. jamyāḥ
3. asyāt, jamyāt, mišyāt, sahyāt, ciṣṭi?
1. buyāma YH, jamyāma, srautāma, 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]srurātam
1. varmadī
du.
2. [a]srur(ē)dvam
3. śyāta

sub.
1. manāi
2.
3. caḥatai, yamatai
3. du. jamailai
1.
2.
3. arantai, yaujantai, vaxāntai

opt.
1. uṣiḍa?
2.
3. drīta
1. manimādi YH
2.
3.

imp.
2. arśva, krśva YH, varśva?
3. ucām

91.1 Root aorists of roots in -a?

The aorists of roots in -a? present special problems because of the final laryngeal.

Stems

There are three roots: /da?-/-, /ga?-/-, YH /za?-/-.

/dha?-/ give, put, /dā-, da?-/, d?-/; see paradigm, with the Sanskrit forms.

/go?-/ go, /ga?-/ (gā-, gāl); /ga?al/.

/za?-/ win, /za?-/ (hā-, -); YH lza(r)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 *-ŋt, but Avestan has replaced */dän/ < *dH-ŋt-nt by /dän/.

Sub. All forms have /-a?-/.

Opt. /daʔam/ from -yaH- am. YH /zaima/ represents *zaH-iH-ma, with full grade (still pronounced /zaʔima/); 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-ŋta (as opposed to /-an/ in the active; cf. §91). The 1 du. /dvadi/ also has zero grade.

Sub. Full grade. Note /daʔadvai/ written daduyē.


Imp. Avestan introduced the full grade.

In general Avestan introduced the full grade in those cases where the zero grade (with θ < H) would have given a quite irregular form.

Root aorist of roots in -aʔ (all forms)

<table>
<thead>
<tr>
<th>Active</th>
<th>Middle</th>
<th>Sanskrit Active</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>ind./inj.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>adham</td>
<td>(adi)</td>
</tr>
<tr>
<td>2.</td>
<td>dāh</td>
<td>dāha</td>
<td>adhās</td>
</tr>
<tr>
<td>3.</td>
<td>dāl</td>
<td>dāta</td>
<td>adhāl</td>
</tr>
<tr>
<td>1 du.</td>
<td></td>
<td>dvadi</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>dāma</td>
<td></td>
<td>(asṭhāma)</td>
</tr>
<tr>
<td>2.</td>
<td>dāta</td>
<td></td>
<td>(sthāta)</td>
</tr>
<tr>
<td>3.</td>
<td>dān</td>
<td>data</td>
<td>adhūr</td>
</tr>
<tr>
<td>sub.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
<td>daʔānai</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>daʔahi</td>
<td>daʔahai/dāhai YH</td>
<td>dhās</td>
</tr>
<tr>
<td>3.</td>
<td>daʔat gaʔat</td>
<td>daʔatai</td>
<td>dhāl</td>
</tr>
<tr>
<td></td>
<td>daʔai</td>
<td>daʔatai</td>
<td>dhāti</td>
</tr>
<tr>
<td>1.</td>
<td>daʔāma?</td>
<td></td>
<td>dhūma</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>daʔadvai</td>
<td>dhūmahe</td>
</tr>
<tr>
<td>3.</td>
<td>daʔan</td>
<td>daʔantai</td>
<td></td>
</tr>
</tbody>
</table>
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 taś- we find /taś-a-/ to avoid a consonant cluster. The stem /hana-/ continues *snH-a-.

\( \text{ap}/- \) obtain, lāpā- (āp-, āpat); lāpaima/ YH.

\( \text{guś}/- \) hear, /guśa-/ (ghus-, -); 3 sg. inj. M. /guśatal, /guśahva, guśadvam/.

\( \text{han}/- \) win, /hana-/ (sana-); /hāna?ānil, YH /hanaimal/.

\( \text{par}/- \) cross, /fra-/ (pt-, -); sub. /fra?āl/.

\( \text{sāh}/- \) teach, /siśa-/ (śās-, śiṣa-); /siṣait, siṣal/.

\( \text{taś}/- \) shape, /taśa-/ (taks-, tākṣa-); /taśah, taśat/.

\( \text{xśā}/- \) observe, /xśa-/ (-); /xshah, xsa?āl/.

\( \text{xśāl}/- \) rule, /xśa-/ (kśā-, -); /xšantal, YH /xšaital, imp. /xšantām/.

\( \text{vid}/- \) find, /vida-/ (vid-, vida-); /vidah, vidat, vidal/.

\( \text{vid}/- \) or /uī-da?-/ satisfy, /vida-/ (vidh-, vidha-); /vida?al(i)/.

Reduplicated roots:

\( \text{nas}/- \) disappear, /nansa-/ (nas-, nīnasa, neśat); /anansat, nansat/.


\( \text{var}/- \) turn, /vavra-/ (-); /vavratāi, vavraya, vavraitadi/ Uncertain.

Inflection

All forms are given in the table. The inflection is the normal thematic one.
Thematic aorist (all forms)

**Active**

<table>
<thead>
<tr>
<th>Ind./Inj.</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>Sub.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>Opt.</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>Imp.</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

93. The s-aorist

Avestan does not have īṣ-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 īṣ-aorist) in Sanskrit too. There is no sa-aorist either.

**Stems**

All forms have lengthened grade in the ind./inj. active, full grade elsewhere. 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 consonant. The \( -s \) of the stem is often changed into \( -s' \). Thus we find before consonant \( s/z, s/\acute{z} \); before vowel \( s/z \) becomes \( h \). The stems found are:

<table>
<thead>
<tr>
<th>roots in velar</th>
<th>ind.-inj. Act.</th>
<th>other Act.</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>/marc-1</td>
<td>/marxš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/hac-1</td>
<td>/haxš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/baj-1</td>
<td>/baxš-1*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/vraj-1</td>
<td>/vrašš-1</td>
<td>/vrašš-1</td>
<td></td>
</tr>
<tr>
<td>/rud-1</td>
<td>/rāuš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/sand-1</td>
<td>/sāns-1(^2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/dis-1</td>
<td>/dāiš-1</td>
<td>/daiš-1</td>
<td></td>
</tr>
<tr>
<td>/fras-1</td>
<td>/fraš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/iš-1</td>
<td>/āiš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/nas-1</td>
<td>/nāš-1(^3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/θvars-1</td>
<td>/θvārš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/varz-1</td>
<td>/vārš-1</td>
<td>/vārš-1</td>
<td></td>
</tr>
<tr>
<td>/r-1</td>
<td>/dār-1</td>
<td>/dārš-1</td>
<td></td>
</tr>
<tr>
<td>/sar-1</td>
<td>/sārš-1(^4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/gam-1</td>
<td>/jānš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/man-1</td>
<td>/mānš-, mānḫ̱-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/van-1</td>
<td>/vānš-1(^5)</td>
<td>/vānḫ-1</td>
<td></td>
</tr>
<tr>
<td>/ni?-1</td>
<td>/naiš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/sru-1</td>
<td>/srauš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/θru-1</td>
<td>/θruaš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/xšnu-1</td>
<td>/xšnuuš-1</td>
<td>/xšnuuš-1</td>
<td></td>
</tr>
<tr>
<td>/ra?-1</td>
<td>/rāḥ-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/sār-1</td>
<td>/sāš-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/sta?-1</td>
<td>/stāḥ-1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>/θra?-1</td>
<td>/θrāš-1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Roots in velar (stem in \( -xš- \))

\( /marc-1 \) destroy, \( /marxš-1 \) (mar-, mṛkṣiṣṭa); sub. \( /marxšatai \). Isolated sa-

subjunctive.

\( /hac-1 \) follow, \( /haxš-1 \) (sac-, sakṣat); \( /haxšāi \).

\( /baj-1 \) distribute, \( /baxš-1 \) (bha-, abhaṅka, bhakṣa); \( /baxšati \) (or thematic present), \( /baxšāl \).

\( /vraj-1 \) walk, \( /vrašš-, vrašš-1 \) (vrāj(i)-, avrājīt); 3 pl. inj. \( /vrāššati \), 3 sg. sub. \( /vraxšati \). The latter form is written with \( ā \), which may be graphic (after \( v \)) or influenced by the injunctive.

1) written with long \( ā \), \( urvāšš- \) 2) written \( sas- \) 3) written \( nāš- \) 4) written \( sārš- \) 5) written \( vas- \)
2. Roots in dental (stem in -s, -z)
/sand- lament, /rasa- (r-); 3 sg. M. /rasatal.
/sans- seem, /sans- (chand-, achān, achānta); 2, 3 sg. inj. /sans, sāns, 2 pl. imp. /santa.
/vad- know/find, /vais-? (-); imp. /vaisdval/; cf. inf. /vaisdval/; also taken as perfect, but /vaisdval never has middle endings.

3. Root in sibilant (s, z < PIE *k, *g(h); stem in -ś)
/dis- show, /dāś-, dais- (diś-, adiksi); 2 sg. inj. /dāśī, sub. /daisāl, imp.
/dāśi/.
/fras- ask, /fras- (pras-, āprāksam); /frasi, fraśa, fraśal.
/nas- attain, /nāś- (-); sub. /naśama/, written nāś.
/θars- shape, /θars- (-); /θārsdval/.
/var- work, /varś- (-); /varśa, varśati, varśanti, varśānai, varśātal/.

4. Roots in -r (stem in -rā)
/dar- hold, /dār- (dhar-, -); /dārīl. But see IV 821.
/sar- unite, /sarś- (-); 3 sg. M /sṛtāl. The ā in sārāta will have been taken from the present.

5. Roots in nasal (stem in -ans, -anh)
/gam- go, /janh- (gama-, agaṁha); /janhati, an isolated sa-subjunctive.
/man- think, /mams-, manh- (man-, mamsā); /manhi, mānta, (a)mahmadi, manhāi/. In /mahmadi/ the n of /manh/- was dissimilated, cf. Skt. agasmahi.
/van- overcome, /vāns, vanh- (van-, vamsā); 3 sg. /vānsī, /vahat(i)/, YH /vahan/.

6. Roots in -i(?), -u (stem in -ī)
/mī- lead, /mai- (ni-, anaiṣam, néṣal); /maiṣatal/, a sa-subjunctive.
/sri- hear, /srauś- (šṛ-, šroṣan); /srauśānai/. Isolated sa-subjunctive.
/θru- nourish, /θrauś- (-); 3 sg. inj. /θrauśat/.
/xnu- satisfy, /xnuś- (/xnuśān, xnuśāi/.

7. Roots in -a? (stem in -ās, -āz, -āh)
/ra- grant, /rās- (rā-, rāsad); /rāhāt/.
/sa- cut down, /sās- (chā-, -); /sāzvam/.
/sta- stand, /stās- (stā-, -); 3 sg. sub.../stāhat/.
/θra- protect, /θrās- (trā-, trāsva); /θrāzvam/.
Inflection

All the forms found are given below.

The numbers of the different forms are (Vedic numbers in brackets):

<table>
<thead>
<tr>
<th></th>
<th>inj.</th>
<th>sub.</th>
<th>opt.</th>
<th>imp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>9 (46)</td>
<td>14 (57)</td>
<td>0 (0)</td>
<td>2 (17)</td>
</tr>
<tr>
<td>Middle</td>
<td>10 (57)</td>
<td>8 (18)</td>
<td>0 (16)</td>
<td>4 (9)</td>
</tr>
</tbody>
</table>

The numbers agree remarkably with the Vedic ones. In the active there are more subjunctive than injunctive forms, which is due to the independent sa-subjectives. 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 -ṣi (12; beside two in -ā).

s-aorist (all forms)

<table>
<thead>
<tr>
<th></th>
<th>Active</th>
<th>Middle</th>
</tr>
</thead>
<tbody>
<tr>
<td>inj.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>āiṣ? dāiṣ, sāns</td>
<td>fraṣi, manhi</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>āiṣ? dārṣi; xṁnāuṣ</td>
<td>bāṛṣṭa, fraṣṭa, maṇḍstā, raustā, sarṣṭa, ṛaṛuṣṭa</td>
</tr>
<tr>
<td>sub.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>dāiṣa, varṣā</td>
<td>hāṛṣāi, maṇhāi, xṁnauṣāi, varṣāṇai, srauṣāṇai?</td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td>rāḥahai</td>
</tr>
<tr>
<td>3.</td>
<td>naiṣai, stāhat, vrāṣṭā</td>
<td>maṛṣṭātai, varṣātai</td>
</tr>
<tr>
<td>opt.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>imp.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>dāiṣi</td>
<td>fraṣva</td>
</tr>
<tr>
<td>2.</td>
<td>saṃsta</td>
<td>sāṛṣṭam, ṛṛāṛṣṭam, vaizṛṣṭam</td>
</tr>
</tbody>
</table>
10. The perfect

We have perfect forms from 17 or 18 roots.

Reduplication

If the roots contains i or u, this is repeated, cit-: lći-kaitrš. But all roots (5) beginning with v- or y- have reduplication with a, /vurāz-/: /vaurāz-/, /van-/ : /vaun-/, /yai-/: /yait-/: "ya-yt". No forms of the type Skt. uvāca 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 /hiśāy/-, which can be analogical from forms where Brugman’s Law operated, but short in /lataš/- which had a double consonant earlier, cf. Skt. tatāksa. The 3 pl. /cikairtrš/ (cikōtīrī) 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 -öi- is also irregular, and its ending is unique in Avestan).

The stems are grouped according to their reduplication.

1. Reduplication with -a-

/dađ-/: give, put, /dadā-/: (d(h)ā-, dad(h)ātha); /dadāba/ YH.
/nas-/: disappear, /nanās-, nans-/: (naś-, nanāsā); 3 sg. /nanāsal, ptc. /nansvāal/
/pars/-: fill, /pafš-/: (pū-, pūrūyās, pūrūvām); 3 sg. M. /pafšal/
/taš-/: shape, /tatas-/: (takš-, tatāksa); 3 sg. /tatašal/
/vrāz-/: be glad, /vaurāz-/: (-); 2 pl. sub. /vaurāzaθal/
/vac-/: say, /vauc-/: (vac-, vauca, uuca); /vauxmal/
/van-/: overcome, /vaun-/: (van-, vāvāna); /vaunarl YH.
/yait-/: line up, /yaitl-/: (yat-, yelīr); /yaitmal/

2. Reduplication with -ā-

/ladar-/: grasp, /dādr-/: (dār-, dādhāra, dadhrē); 3 sg. M. /dādrail/
/kan-/: desire, /caxn-/: (kan-, cākānāl); /caxnarl/
/van-/: wish, /vaun-/: (-); ptc. /vaunus?/ Perhaps rather an adjective /vanu-/. /varz-/: work, /vārz-/: (-); 3 sg. M. /vārzail, ptc. /vārzāna-/

3. Reduplication with -i-

/cit-/: think, /cikait-/: (cit-, cikēta); /cikaiitrš/.
/hi-/: bind, /hiśāy-/: (si-, sisāya); /hiśāyal/
4. Roots with V-
/lad-/ say, /ād-/ from *Ha-Hād- (-); 1 sg /ādal YH, /ādarl.
/lah-/ be, /āhl- (as-, āsa); /āharl.
/lār-/ rise, /ār-/ < *h3e-h3r- (īr-, -); 3 sg. M. /ārail.
/lāp-/ obtain, /āp-/ (from *Ha-HHāp-) (āp-, āpitha); ptc. /āpāna-/ written āp-; Skt. āpāna-.

5. Unreduplicated
/vid-/ know, /vaid-, vid-/ (vid-, vēda); /vaida, vaista, vaidal, sub. /vaidāl 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. /vaidā, YH āda
2. /vaista, YH dādāba
3. /vaida, tataśa, nanaśa, hiśāya
1. /vauxma, yaiūma
2. 
3. ādar, āhar, cāxnar, YH vaunar
cikaitrś
sub.
1. /vaidā?
2. 
3. 
1. 
2. /va vrāzāba
3. 
opt.
3. /vidyāl

Middle
ind.
3.sg. dādrai, pafrai, ārai, vāvrazi

11. Future
There are one or two future forms in Gathic:
/vaxšya-/ from /vac-/ (vakṣyāti); 1 sg. /vaxšyāl 30.1a, 44.6b, 45.1-6a, 46.15a, 51.8a.
188

THE VERB

/saušya-1 if future from /sū-/ save (Skt. sosyāti); ptc. /saušyant-. From *sauH-sia-, but note that Sanskrit has a (recent) form without i < H. They are made with the suffix -iya- 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.

/ ibarya-1 be carried, /bar-1 (bhriyāte); sub. /ibaryaAint 32.15c.
/sruya-1 be heard of, be famous, /sru-1 (šrūyāte); 1 sg. M /sruyai 33.7b.
/ vašya-1 jump, /vanc-1 (vañe-); /vašyatai 44.11c.
/ vazyat be carried = be married (-); /vazyamnā-1 53.5a.

One of these forms has full grade, whereas the Sanskrit forms have zero grade (bhriyāte, ucyāte). 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 -a- 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:

/icaiši- from /ciš-/ promise; 51.15c.
/mraviś, written mraoi, from /mrut-1 speak (or from /mrut-1 maltreat ?); 32.14c. The form has short -a- because it ended in a laryngeal: *mrauH-ti.
/sravī from /sru-1 hear; 32.7b.8a, 45.10b, 53.1a.
/(a)vaciś from /vac-1 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-(/ciešnuša-); 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 -tH-, with H taken from the set roots. There is one root in a nasal, which has /vivānha/- /vivānha-, which is mostly derived from *vānsa-. This would require the introduction of the nasal which is found in Sanskrit, e.g. jīgānśa- (as against Skt. vivās- < *vi-ṃH-so-), but this could be a Sanskrit innovation. It is noteworthy that this root does not have the nasal in Sanskrit (vivās-). But -ṅha- 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. /vivahatul/ /vivahatul from *viṃso-.

The reduplicating vowel is written long in some forms, short in others. No system has been found.

/cixšnusā-/ satisfy (-); 1 sg. ind. /cixšnusā/ 49.1b, nom. sg. /cixšnusah/ 32.8b, 43.15d, 45.9a.

/didarša-/ hold, anit root dar- (-); 3 sg. M inj. /didaršatal/ 46.7b.

/dihrā-/ hold, fast, * dihrgh-so- (-); 2 sg. inj. /didržah/ 44.15d.


/dibža-/ deceive, * di-dbh-so-, root dabh- (dīpsati); inf. /dibžadyaïl/ 45.4e.


/iša-/ go, root i-, *Hi-Hi-so- (išati); 2 pl. /iša/ 45.1b, ptc. /išantah/ 30.1a, 47.6d.


/mimagža-/ present with, glorify, *mi-mngh-so- (-); nom. sg. /mimagžah/ 45.10a.

/vivarsa-/ turn, root var- (-); nom. sg. /vivarsah/ 45.8a.

/vivānha-/ overcome, van- (van(i), vīvāsati); /vivāhatul/ 53.5d.

/vi. dismna-/ has been explained as a desiderative of di- ‘give’ without reduplication (*di-dH-sa- would have given Av. *disa-), *dH-sa- > diša-; cf. LAv. vīdiśā- ‘liberality’.

All forms found are:

ind. 1. /cixšnušā/
     2. pl. /išaθa/
     3. /jijīšantil/ YH

inj. 2. sg. /didržah/
     3. /hišaθal/

imp. 3. sg. /vivānhatul/

inf. /dibžadyaïl/

ptc. /išantah/

adi. /mimagžah/
     /cixšnušah/
     /vivarsah/
Note that there is an adjective in -a, of which some nominatives are found. It is equivalent to the Sanskrit adjective in -sū-.

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. /zausaumī/ as against jōhavīti. This -i- is a vocalized laryngeal, but in Avestan a laryngeal was not vocalized in this position.

/dis-/ show, /daidalais-/ (dis-, dēdište); /daidaišit/ 51.17a.

/lvid-/ find, /lvaivid-/ (vid-, vēvid-); /lvaividatal/ or /latal/ 30.8b, 3 pl. ind. or 3 sg. sub.; 1 sg. M /lvaividat/ 44.11d.

/lzu?-/ call, /zaauzau-/ (hū-, jōhavīti); /zausaumī/ 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.

/ra-h-/ deflect, /ra?r̥ya-/ (-); /ra?r̥yanti/, sub. /ra?r̥ya?an/. (There is a noun from this root with (intensive) reduplication, /ra?r̥a-/.)

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 -ya( (see III 1). One of the three forms, however, has -hya-, and was therefore perhaps not accented on -ya-.

/ʃuυy-/ from /pasu-, graze; 2 sg. inj. /ʃuyah/ 48.5d; /ʃuyant-/ farmer. YH /iṣudy-a-/ from /iṣud-, Labung darbringen; /iṣudyāmahī/ 36.5, 38.4, 39.4.

YH /namahya-/ from /namah-, adore; /namahyāmahī/ 36.5, 38.4, 39.4.

/yasahya-/ attain glory, cf. Skt. yāsas-; /yasahyānī/ 51.4b.

Isravahya-/ attain glory, from /Isravah-/ (sravasyāti); /Isravahyati/ 32.6a.

Doubtful are

YH /maikaya-/? from */maika-, drip?; /maikyant-/ 38.3. Mss. also have /maikant-./

vādāyōi 29.2c, which is uncertain.

/Varzayantahī/ 45.4c, cf. Skt. āṛjāyant-; others take it as a causative.
15. Non-finite verb forms

15.1 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 /-asul/ 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- < *-qt-.

The feminine has /-anti-/ in the thematic, /-atii-/ in the athematic verbs.

We find:

```
them. /ham bavantii/ acc. pl. YH /maika(ya)ntii/ ath. /halimi/ /syatiibyahali/
```

Forms in -yant are very frequent.

There are only two aorist forms (or even one: /dant-/ and /vi dant-/).

A future is /sausyaant-/ 'saviour'.

**Middle.** For the middle the thematic form is -amna- < *-omhīno-. 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 × 7 = 4.3 athematic middle forms. This leads to the idea that -āna- was replaced by -amna- in Gothic. There are a few forms that suggest this: /lxšnausamna-/ beside an s-aorist (it is probably derived from the sa- subjunctive); /frinamna-/ stands beside athematic subj. /frināil/, but there are thematic forms in Late Avestan; /agžanvamna-/ has been compared with Skt. kṣanute, 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 /lāpāna-/, and in the YH /vārēāna-/. This confirms that -āna- existed in Gothic 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-mhīnos. (*-mHna resulted in Stk. *-mna-, 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:

<table>
<thead>
<tr>
<th></th>
<th>active</th>
<th>middle</th>
<th>total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pres.</td>
<td>aor.</td>
<td>pres.</td>
</tr>
<tr>
<td>them.</td>
<td>25</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>ath.</td>
<td>7</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>total</td>
<td>34</td>
<td></td>
<td>15</td>
</tr>
</tbody>
</table>

Active presents: thematic

1. Presents in -a-
   /buʔ-/ be: YH /ham bavantš/ acc. pl. fem.
   /bud-/ be aware: /baudantah/ nom. pl.
   /fras-/ ask: /frsans/ nom. sg.
   /iš-/ arrive: /išantah/ voc. pl. 30.1a, acc. pl. 47.6d.
   /iš-/ urge: /išantš/ loc. sg. m. 46.9e. (Or 3 pl.)
   /mar-/ have in mind: /marantah/ nom. pl. m.
   /mruc-/ sink: /mrucans/.
   /nad-/ abuse: /nadantah/ acc. pl. m. 33.4c.
   /rap-/ support: ntr. /rapant/, /rapantu/, acc. pl. /rapantah/.

2. Presents in -(a)ya-
   /druj-/ deceive: gen. /adrujantah/.
   /uxš-/ grow: gen. du. /uxšuxšyantš/ 33.9a.
   /dviš-/ be at enmity: /dvišyantš/.
   /fšyay-/ breed cattle: /fšyayantš, -antai, -asul/, nom. pl. /afšuyantš/.
   /iš-/ prosper: /išyantš/.
   /maikaya-/? drip?, /maikayantš/? YH 38.3.
   /nas-/ disappear: nom. pl. /nasyantš/.
   /piš-/ ? : /pišasul/.
   /xša-/ rule: /xšasul/, nom. pl. /-antah/.
   /yasahyá-/ attain glory: ntr. /yasahyán/.
   /zuʔ-/ call: /zuʔyantš/.

3. Presents with -sa-
   /ižd-/ implore: /ižsans/.
   /yā-/ ask for: /yāsans/.

4. Presents with -va-
   /fji-/ live: /fjivans/, acc. pl. /fjivantš/.
   /raʔš-/ pervade?: ntr. /raʔšvan/.
Active presents: athemeatic

1. With -ant-l-at-
/ah-/ be: /hans, hatam/, fem. /hatim/.
/ci-/ separate: gen. sg. /ciwatah/.
/dau-/?: /dawans/ 31.10c. Perhaps for /dawans/. May be thematic.
/i-/ go: /yantaml/.
/sru-/ hear, stem /sru-/: acc. pl. /srunatas/- YH.
/ši-/ dwell: /šyang/, dat. pl. f. /šyaišyahl/.

2. With -at- only
/višpā-hišas/ nom. sg. m. of a reduplicated present (root unknown), e.g.
*si-sH-ŋt-s.
/stu-/ praise: /stavas/ nom. sg. m. from static *stou-ŋt-s.

Active aorist: athemeatic

da-/ give, put: nom. pl. /dantahl/ < *dH-ant-, /vi dawals/.

Active aorist: thematic

/han-/ win: /hanantail/.
/vid-/ satisfy: /vidans/.

Future

/saušyant-/ ‘saviour’, if fut. ptc. of /su-/: /-ans/, gen. /-antahl/, nom. pl.
/-antahl/, gen. pl. /-ANTAAML/.

Middle presents: thematic

1. Presents in -a-
/fras-/ ask: /frsamna-/.
/fril/ please: /frinamna/.
/hac-/ follow: /hamamna/.
/iš-/ desire, stem /isa-/: /isamna/.
/sar-/ unite: /saramna/.
/uad-/ carry: /vadamna/.
/vid-/ find: /vaidamna/.
/hvar-/ eat: /hvaramna/.
/yaz-/ adore: /yazamna/.

2. Presents in -(a)ya-
/syazd-/ retreat: /sišdyamna/.
/vaz-/ carry: /vazyamna/.
/urz-/ work: /urzyamna/.
/xsā-/ rule: /xsayamna/.
3. Presents with -sa-
/\vi dišamnna-\ 51.1b. Desiderative? See 13.2

4. Presents in -va-
/\agžanvamna-\ 28.3b.

Middle aorists: s-aorist

/xšnu-\ satisfy: /xšnaušamnna-\; 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: /\vidvâ\, vidušah, -ušal. On /\viduš/ see VI 23.
/\nas-\ disappear: /nansvâhl.
/\va\nuuš\ is rather an adjective /\vanu-\.

Middle

/\āp-\ obtain: /\āpâna-\, written ap-.
/\varz-\ work: /\vārzâna-\ 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 /l\dâ-\ (cf. 91.1), /ltaš-\ and ?/yap-\.

The adjective with -na- has only two examples.
1. With -la-
/laṣla-\ 51.12b (nas- reach).
/lâ\ta, nîda\ta-\ (dâ-).
/l\drṣla-\ in /ldrṣṭ\\t\ainah-\, /labîdṛṣla-\ (drs- see).
/\guṣla-\, a-\ (gu\ṣ- hear).
/l-išla-, fra-, zastâ-\ (i\ṣ- urge).
/l\iṣla-\ YH 40.4 (i\ṣ- desire).
/l-kṛ\ta-, han-, hu-\ (kar- make).
/l-must\a-, a-ham-? Uncertain.
/l\rixt\a-\ subst. remainder (rîc- leave).
/l-srula-, fra-\ (sru- hear).
/\taṣla-\ (ta\ṣ- shape).
15.3 The gerundives

A few forms in -i(?)a are gerundives.
/aujyasā/ loc. pl. 46.12b ‘praiseworthy’.
/iṣṭā/ 48.8c ‘which is to be sent’. Differently interpreted. The forms
/iṣṭānā/ acc. pl. 32.16c and /iṣṭām/ acc. sg. f. 51.17b may or may
not be the same word.
/vaidīrā/ 44.8d if ‘which are to be acquired’, from vid- ‘find, acquire’.

Variant vaṣdyāi.
/varīaml/ 34.14a, 51.1a, /varīāh/ 43.13e gen. sg. f. ‘to be chosen’.
/zahirā/ 53.8b if ‘risible’ from zah-, Ved. has-. Uncertain.
/zavi?aml/ 31.4a ‘to be called’.

All forms but one have -ia-, which cannot be due to Sievers’ law and thus
point to -iHā-. In the Rigveda the gerundives mostly have disyllabic -ia-.
For /aujja-/ 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 bet-
ter explained otherwise. Still there are several Gathic forms which are
called infinitives by some scholars, whereas others explain them dif-
ferently.
In Late Avestan there are only very few traces of infinitives (especially when -tēd-/tayaē-ca is not considered as an infinitive).

The Gathic forms found are (Vedic equivalents in brackets):

<table>
<thead>
<tr>
<th>Form</th>
<th>1</th>
<th>(-dyail)</th>
<th>1?</th>
<th>(-manai)</th>
<th>1?</th>
<th>(-vail)</th>
<th>2</th>
<th>(-vanai)</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>/-dyail/</td>
<td>17</td>
<td>(-dhyaï)</td>
<td></td>
<td>(-vail)</td>
<td></td>
<td>(-vail)</td>
<td></td>
<td>(-vail)</td>
<td></td>
</tr>
<tr>
<td>/-ah/</td>
<td>2</td>
<td>(-as?)</td>
<td></td>
<td>(-vail)</td>
<td></td>
<td>(-vail)</td>
<td></td>
<td>(-vail)</td>
<td></td>
</tr>
<tr>
<td>/-ail?</td>
<td>1?</td>
<td>(-e)</td>
<td></td>
<td>(-vanai)</td>
<td></td>
<td>(-vanai)</td>
<td></td>
<td>(-vanai)</td>
<td></td>
</tr>
<tr>
<td>/-tai/</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>/-hai, -sail/</td>
<td>6</td>
<td>(-se)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The agreement with Vedic is not complete. The Vedic forms -tum, -toh, -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 *-dhyāī 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.

/-dyāī/
17 infinitives have /-dyāī/. These are:

- /pār-/ rise: /uz-{(p)i}rdyāī/ pres. (with red.) 43.12c, 14d. Late Avestan has mostly active forms from ar + us.
- /būs-/ endeavour: /būzdhyāī/ 44.17d. The form can be a root present or a root aorist (but Vedic has no aorist). Ved. bhāṣati has only active forms, but the meaning can be middle.
- /ci-/ distinguish: /cidyāī/ 31.5a, 49.6c. GAv. has a root aorist, with one active and one middle form. Middle interpretation well possible.
- /dab-/ deceive: /dibżadyāī/ desid. 45.4e. Active (passive translation possible).
- /dar-/ hold: /drdyāī/ 43.1d. dar- has a root aorist middle (and an s-aor. act).
- /da>-: /ddadyāī/ 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 möng, 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 /dadyāī/ is possible.
- /دا>-: /dadyāī/ 35.4, 44.1d pres. < *da-dH-. Passive or middle.
- /jan-/ slay: /jadyāī/ 32.14c can be a present. (Vedic has no aorist.) Passive.
- /marc-/ destroy: /marngdyāī/ pres. 46,11b. Act. or middle?
- /marz-/ destroy: /mrnždyāī/ pres. 44.14c. Act. or middle?
THE VERB

/nas/- attain: /ażdyā/ 51.17c. There is a root aorist ans-/as-. Probably middle.
/sanh/- announce: /sazdyā/ 30.2c, 51.16c. There is a root aorist sas-. Probably middle.
/sru/- hear: /srudyā/ 34.12b, 45.5b, 46.13b, 14b. There is a root aorist. Middle, ‘to be heard’.
/su?-/ strengthen: /sūdyā/ 44.2c, 49.3b. Avestan has no aorist. Probably passive.
/θra?-/- protect: /θrādyā/ pres. 34.5b. All forms of θra?- are middle.
/vid/- know/find: /vaizdyā/ 43.13c. This form is taken from vid- ‘know’, but this would be *vizdyāi (cf. /vidvāi, vidvanāi/), as all other roots have zero grade before /-dyā/. It belongs clearly with 2 pl. /vaizdyāni/, 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 /vaivdi-/ if we read /vaividatai/ in 30.8b).
/varz/- work: /vazdyā/ pres. 33.6b, 43.11e. Act. or middle?
We found the following situation:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>/uz(-?)i?rdyā/</td>
<td>act.?</td>
<td>/būzdyā/</td>
<td>?</td>
<td>act.?</td>
</tr>
<tr>
<td>/dazdyā/</td>
<td>med.</td>
<td>/cidyāi</td>
<td>aor.</td>
<td>med?</td>
</tr>
<tr>
<td>/jadyā/</td>
<td>med.</td>
<td>/drdyā/</td>
<td>aor.</td>
<td>med.</td>
</tr>
<tr>
<td>/mrṇdyā/</td>
<td>?</td>
<td>/dādyā/</td>
<td>aor.</td>
<td>med.?</td>
</tr>
<tr>
<td>/mrṇzyā/</td>
<td>?</td>
<td>/jadyāi</td>
<td>pres.</td>
<td>med.</td>
</tr>
<tr>
<td>/brādyā/</td>
<td>med.</td>
<td>/ażdyā/</td>
<td>aor.</td>
<td>med.?</td>
</tr>
<tr>
<td>/urzyadyā/</td>
<td>?</td>
<td>/sazdyā/</td>
<td>aor.</td>
<td>med.?</td>
</tr>
<tr>
<td>Desid.</td>
<td>/srudyā/</td>
<td>aor.</td>
<td>med.</td>
<td></td>
</tr>
<tr>
<td>s-aor.</td>
<td>/vaizdyā/</td>
<td>med.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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 (/būzdyā/ 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

1 Root present/aorist known in Gathic.
(Note that /jadyā/ 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 *-dhiō- (which was already obsolete at the end of PIE).

/-ahl/
An infinitive in /-ahl/ is probable for:
/urzyah/ 30.5a, from a present stem.
/lavahl/ 32.14b form /lav-, u?-/ help, pres. /lava-/l, though the context is hard to understand (there is another /lavahl/ in 14c, which will be a corruption).

For other forms an infinitive is less probable: /dārayah, fīuyah, savayah, uxšyah/ in 32.1c, 48.5cl, 51.9c, 31.7c resp. can be 2 sg. inj. pres.; azō in 43.14d is monosyllabic, so it cannot be */azahl/; probably it is /az/ 'I', 1 sg. pers. pron. /xšyah/ 32.5c may be a nom. sg. m. 'ruler'; xš(a)yō 31.20a may be /xši̯ahl/, gen. sg. of /xši̯a-/ complaint; /vidahl/ 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.

/-ail/
/pail/ 44.15b, 16b from /pa?-/ 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: /lärail (ärōī) 50.5a is rather a perfect. /lärail (*aře) 28.4a (*mōng *aře for mōn gairē) is not explained with certainty. /mrail/ will be /mravil/, pass. aor. /nmaiail/ 46.1a is quite unexplained. /savail/ 43.12e is rather the loc. sg. of sav-, sujē (*su?ail?) 49.9a is by some taken as an infinitive. /srayail/ 33.7b is rather from passive /sraya-/ hear, /sstail/ is not from *stiH-ai but from ah- be (see under /-tail/).

/-ail/ is identical with Skt. -e, in origin the dative ending of root nouns.

/-ail/
/galail/ 43.1c, 51.10c from gam- go.
/mrūtal/ 49.6a from mru- speak.
/sstail/ 30.8c, 46.12e from sanh- announce.
/stail/ 31.8a, 33.10a etc. from /ah-/ to be.
The forms /ittail and /pasi-(?)rtail can better be taken as nouns. /šyavatal/ 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.

/i-hai, -sail./
/frādhai/ 44.20e from /frāda/- increase.
/rāṣṭayathai/ 49x3b, 51.9c causative of /raš/- injure.
/šrāvayathai/ 29.8c causative of /sru/- hear.
/vaucahail/ 28.11b from the them. aor. /vauca/- say.
/vainahail/ 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. -āse, which is used from thematic stems (jīvasē, punyāsē) and with roots (tujāsē). There are only two forms with -se (jiśē, stuśē).

/-manail/
/xšanmanail/ 29.9a from /xšan/- listen. Reading and interpretation are uncertain. /-manail/ would agree with Skt. -mane (not with Gr. -menai).

/-vail/
/dāvail/ 28.2b, 44.14d, 51.9b from /da?/-.
/vdvail/ 43.9c, 44.8d from /vid/- know and/or find.

/-vanail/
/vidvanail/ 31.1b from /vid/- know.
/rovănail? from /ar/-l. One expects this form to be written *orvănōil-ē, but we have urvānē.

Identical with Skt. -vane (only dāvāne, turvāne and ?dār̥vāne).

Other forms sometimes taken as infinitives

/-ām/ in /ucāml/ 48.9c and /wi-da?āml/ 32.6c. These are in fact imperatives of a middle aorist.
/uzūbyail/ 46.5e ‘to help’. The form can be the dative of a hysterodynamic noun in -ti-, *-tyai.
/haśbaïl/ 32.14a from hi- ‘bind’, can also be the loc. sg. of an a-stem.
/ūdai/ 46.3d ‘to help’ has also been interpreted as dative from /ūdha/- (not connected with au-).
/raďvanl/ 31.7a has been taken as infinitive, but also as a participle (neuter sg.).
lavapastaiši 44.4c and /fra?rtaiši/ 46.4b can as well be taken as nouns.

/uzmahl 46.9b has been considered as a locative infinitive of an s-stem. The form (uzōmōhi) is very uncertain.

/varcali 32.14b idem. The form (varcā. hičā) 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.

/lā vivarshah, cišnušah, mimagžahl 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 *bhī?H- be afraid? If it stands for /bayantail/, the first half line of a verse of 7-9 syllables would have 8 syllables, which is very improbable.ATHematic *bhī?H-antai would give the same problem. Perhaps *bhHi-antai?

dainti 32.15b. Probably from *dH-anti, but meaning and root are uncertain.

hičā 46.1c. The metre requires three syllables. If it is subjunctive, it was /haça?âl/, from the present haca- (which presents active forms in LAv.); a root aorist would give /haca/. An ind. pf. /hahacal/ 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 probably 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**

1, 2 etc. the present classes

**Aorist**

1, 2 etc. the present classes

**Perfect**

(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
- ban poison
- ciš promise
- ciθ teach/erkennen
- danh know, learn
- dav swear
- daxš reveal
- dbanz support
- dī see?
- dyulḍuv endeavour
- drang consolidate
- dvar hurry
- frād increase
- hvar eat
- marz destroy
- nad abuse
- nar p wane
- piš see?

- rah alienate
- rāp support
- raš damage
- rāθ cling to
- riθ pervade?
- sar unite
- syažd retreat
- θvarš shape
- θvi strengthen
- θru nourish
- vaf eulogize
- van wish
- vap scatter
- "var turn
- "var lock in?
- var work
- vrāž be glad
- xšnu satisfy

The 7 roots of which a Sanskrit equivalent is doubtful are:

darz fasten : džh make firm
hap hold : sap serve
ižd implore : iḏ praise
mang present with, glorify : māṁh give, bestow
rup cause pain : rup break
sac learn : sak 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: ādiṃṣi);

vraj (are /urāxṣaṭ/ and urāḷiṇī B old s- aorists of a set root?).

The 13 roots of which no formation has an exact correspondence in Sanskrit are:

{\text{2ah}} mard  {\text{2rud}} hold back
{\text{āz}} miθ  vižd
{\text{guṣ}} par cross  xrud
{\text{1hū}} increase  1rud lament  xsā

The 16 roots that have an exactly corresponding formation in Sanskrit for some formations but not for all are:

baj  spas  xrap

dar  stā  xśā

garz  sū  yā

hac  val  zā

{\text{1nas}} attain  vaxṣ

{\text{2nas}} disappear  2vid 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.

\[
\begin{array}{lll}
\text{PRESENT} & \text{AORIST} & \text{PERFECT} \\
+ {\text{ad}} & \text{say} & + {\text{ah}} \\
+ {\text{ah}} & \text{be} & 2 \text{ ( = )} \\
\end{array}
\]

\[
\begin{array}{llll}
+ {\text{ah}} & \text{throw} & 2 \text{ ( = )} & \text{R} \text{: : pf} \\
\end{array}
\]

\[
\begin{array}{llll}
+ {\text{ad}} & \text{say} & + {\text{ah}} & \text{say} \text{( = )} & - ; - ; \text{pf} = \text{pf} \\
\end{array}
\]

\[
\begin{array}{llll}
+ {\text{ah}} & \text{be} & + {\text{ah}} & \text{be} \text{( = )} & 2 = 2 ; - ; \text{pf} = \text{pf} \\
\end{array}
\]

\[
\begin{array}{llll}
\text{2 lahmi, hanti} & \text{lādhari} & \text{āha} \\
\text{2 āsmi, sānti} & \text{lāhāri} & \text{āsā} \\
+ {\text{ah}} & \text{throw} & + {\text{ah}} & \text{throw} \text{( = )} & - ; 4 ; \text{R} : - ; - ; \text{pf} \\
\end{array}
\]

\[
\begin{array}{llll}
\text{R} & \text{Ias} & \\
\end{array}
\]
4 āsya-ti
+ ar rise : īr, ī set in motion (=) 3, 6r = 3, 6r; R = R, a; pf = pf
3 /uz-ṛi?r-dyāi/ inf R /aparam, arantai/ sub. lāraī
er-tu-
3 īyarti, īrte R ārīa, opt. arīla āra
6r aīrat a ārāt, āranta
+ ard flourish : ĝdh thrive (=) - 4, 5, 7; R = R; - : pf
R /ardai/ sub
4 īdhya-ti R īdhyaṁ opt. āṇḍhe
5 īdhnōti
7 īndhat sub
+ arj be worth : arh deserve (=) 1 = 1; - -; - -
1 /arjatil/
1 ārha-ti
+ aug say : ūh consider (=) 2M = 2M; - iś; - : pf
2 /augh-ai, aug-madai/-
2 óhate iś āhiśta īhē
c + av comfort : av favour (=) 1 = 1; - R, īr; - : pf
1 /avah-mi/
1 āva-ti R avyās āva
is āvīl
—az? draw near:
1? /azāba/ ind? (see zā)
+ āp obtain : āp obtain (=) - : 5; a = a; pf = pf
a /āpaimal/ āpāna-
5 āpnōti a āpat āpa
+ āz be eager : *āh desire (-) 4 : 6r; - -; - -
4 /izyā/ ind.
6r (īhate B)
+ baj distribute : bhaj divide (±) 1sa : 1, 2; s = s; - : pf
1sa /baxša-hval/ imp. s /baxšal/
1 bhājati s ābhāk, ābhaksi babhāja
2 bhāksi
—ban poison:
CS /bānayan/
+ bar bring : bhṛ bring (=) 1, (2?) = 1(2, 3); - : s; - : pf
1 /bara-ti/
2 /bar-tu/?
1 bhāra-ti s ābhārsam jabhāra
2 bharti
3 bibhar-ti
+ bṛ? be afraid : bhi fear (?)
**THE VERB**

| 3 bibhēti | R bhema | bibhāya |
| 1 bhāyate-te | (s abhaiṣma) |
| + bū be : bhū be (=) | 1 = 1; R = R; - : pf |
| 1 /bavantīs/ ptc. | R /buvati(ī) / sub |
| 1 bhāvati | R ābhūt | babhava |
| + bud be aware : budh is awake (=) | 1 = 1; 4; - : R, a, s; - : pf |
| 1 /buda-nt-/ | |
| 1 būḍha-ti | R ābudhān | bubudhe |
| 4 būḍhyale | a budhānta | s ābhuisi |
| + būś bring about : bhūś is busy, cares (?) |

No finite forms. /būḍdyail/ inf

(6) bhūṣati

| + ci distinguish : ci gather (=) | 5 = 5; R = R - : pf |
| 5 /ciṇaut/ | R /ciṇata/ |
| 5 ciṇati | R acet | cikāya |

-ciś promise:

| 7 /ciṇas/ | R /ciṇaśam, ciṇṭal/ |
| + cit think : cit perceive (=) | - : 1, 2; - : R, s; pf = pf |

| 1 cēta-ti | R cētāna |
| 2 citē 3s | s ācāit |

-ciΘ teach/erkennen:

| R /a)cista/, /ciṭaṭi/ sub |
| + dab deceive : dabh deceive, harm (?) cs = cs, 1; - : R; - : pf |

CS /dābayati/

| 1 dābha-ti | R dabhūr | dadābha |

CS dambhāyati

-dānḥ know, learn :

| 3 /đidhayai/ 1s |
| + dar hold : dhṛ hold (±) cs = cs; R, s = R; pf = pf |

CS /dārayati/

| R /dṛta/ | /dadrāi/ |
| s /dṛṣṭi/? |

CS dhārāyati (R dhṛ-thās AV) dādhāra, dadhré

| + dars see : drś see (=) - -; R = R (a, s) - : pf |

R /a)darsam/ |

R ādṛṣṭan | dadārśa |

(a dṛṣan) |

s ādṛksata |

? darz fasten : ? dāṭh make firm (?) |

DES /đidrāžai/
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 /dodāti/ R /dāt/ dadau
3 dādāti R ādāt dadhāu
dādāmi R ādāhā a dhat
+ dā³ distribute : dā divide (=) ya = ya, aya, 2; - : s; -
ya /dyāpāi/ sub
2 dāti s diśīyā opt.
ya dyāti
aya dāyate
+ dā³ bind : dā bind (=) ya = ya; - ; -
ya /dyatām/ imp.
ya dyāti
— dbanz support : 1 /dbanzati/
+ dbu befool : dbhu harm (=) 5 = 5; - ; -
5 /dbnauta/
CS /dbāvayat/ 5 dbhnuwantī
+ dbiś be at enmity with : dviś hate (=) 2,4 : 2; - ; -
2 /dbiśant/-
4 /dbiśyant-/
2 dvēṣṭī
— di see? :
3 /dadya/ 1/dadyatai/ 
+ dis show : diś show (?) - : 4; s = s(R); - : (pf)
4 /dīśāmi/ s ādikṣi (dideśa AV)
R ādiśṭa
Ved. dikš- does not have the old ablaut. Nart. 140f.
— div endeavour; or dyu?
4 /diyant/-? /dyuyant-? 1/drayant/ 
— drang consolidate :
DES /didragžadvai/
+ druḥ deceive : druḥ be hostile (=) 4 = 4; - : a; - : pf
4 /drujiyant-/ 
4. druhyati B  a druhas  dudroha
— dvar hurry:
1 /dvaranta/
+ fras ask : praś ask (=)  sk = sk; s = s; -
sk /prasu/ s /fraši/ 
sk pračhāti s aprāksam
— frād increase:
1 /frādantai/
+ frī please : pri please (=)  9,6n = 9; - : s - : pf
9 /frināi/ sub
6n /frinamna-/ 
9 priṇāti s presat sub  pipriye
+ gam go : gam go (=)  sk = sk; R = R (a, s); - : pf
sk /jasat/ R /jan, gman/
sk gācchati R ágan  jagāma  
(a ágamat)
(s agasmahi)
+ garz complain : grh complain (±) 2M,3 = 2M; - -;
2 /grzai/, /grēda/ 
3 /jgrzai/ 3pl
2 ghe (Hoffmann Aufs. 439)
+ gā go : gā go (=) - : 3; R = R - : pf
R /garat/
3 jigāti R ágāt  jagāyāt opt
+ grab grasp : grabh seize (=) - : 9 R = R - : pf
R /graham/
9 grbhānti R ágrabhran  jagrābha
+ guś hear : ghūs (-) - : 1; R,a : -; -
R /guśta/  
a /guśata/ M

1 ghosati
+ hac follow : sac follow (±) 1,6r : 1; R,s : s; - : pf
1 /hacatal/ R /hacā, seantul/
6r /hiscānadai/ YH  s /haxsāi/ 
1 sācate  s (a)saksāta 3p  saścūr
+ had sit : sad sit(?)
DES /hiśsat/
Comparison impossible
+ hah sleep? : sas sleep (=) 2 = 2; - ; -
2 /hahmai/
2 sásti
+ han earn: sanî win, gain (=) - : 8; a = a; - : pf
  a /hanaʔâni/ sub
8 sanóti
  a ásanat
? hap hold: sap serve (—) 2 : 1; - ; - : pf
2 /hapātil/
1 sápati
+ hi bind: si bind (=) - : 9; - : R; pf = pf
  /hišâya/
9 sinâti
  R sitâm imp.
  sišâya
+ hū increase: sū impel (—) 9 : 6,2; - : iš; - : pf
9 /hunâtil/
2 sūte
6 susvāti
  iš áśāvî
— hvar eat:
1 /hvarâma-n/
+ i go: i go (=) 2 = 2; - ; - : pf
2 /aitil/
2 ēti
  /iyāya
+ iš be able: iš be master (=) 2 = 2(1); - ; - : pf
2 /išâil 3s
2 īšte
1 īšate 3s
+ iš desirâ: iš desire (=) sk : sk; - ; -
sk /išaya/ opt. M
sk ichdâti
+ iš urge, impel: iš send (=) 4,6 : 4,6,9; - ; - : pf
4 /išâyal/
6 /išâpati/
4 išyati
9 išpâti
6 išánta
? ižd implore: ižd praise sk : 2; - ; - : pf
sk /iššâāl/
2 īšte
+ jan slay: han slay (=) 2 : 2; - ; - : pf
2 /jântâ/
2 hânti
+ ji win: ji win, conquer (?)
DES /jijisânti/ 39.1
DES jijisâti
+ ji live: ji live (=) va : va; - ; -
va /jīvāmahi/
va jīvati
+ kan enjoy, desire : kanī enjoy (=) 4 : 4; - : s; pf = pf
4 /kāyā/ ind.
4 kāyamana- s ākānīsam /cānxar/ cākanat, cakā
+ kar make : kr̥ make (=) 5 : 5(8,2); R : R; - : pf
5 /krnavan/ sub. R /cālar/
5 kr̥c̥li R ákar cakāra
8 karōti
(2 karṣī AV)
+ man think : man think (=) 4 : 4(8); R,s : R,s; - : pf
4 /mānyatai/ R /mānta/ s /māni/ sā
4 mānyate R -amata mammāte 3d
8 manutē s āmansta
? mang present with, glorify : ? mānh give, bestow (?)
DES /mimagzhāl/
+ mar recite, have in mind : smr̥ remember (=) 1 : 1; - -;
1 /marantī/ smr̥ārati
1 smārati
+ marc destroy : mṛc injure (—) 7 : -; s : prec; - -
7 /mrncatai/ 3p ind s /märxcati/ sub
CS mārcyati s mṛksiśṭā prec.
+ 'mar d destroy : mṛ(a)d crush (—) 6n : 1(9); - -;
6n /mrndati/ inj.
1 mṛnda
(9 mṛdnāti S)
+ 2mard neglect : mṛdh neglect (=) - : 1,6; R : R(iś); - -
1 mardhati R mṛdhyās opt.
6 mṛdhāti sub iṣ mardhiṣat sub
— marz destroy:
7 /mrnzdyāi/ inf.
+ marzd be merciful : mṛd be gracious (=) 6 : 6; - -;
6 /mrzdeta/ imp
6 mṛdzāti
+ mā order : mā measure (=) 3 : 3; - : R,s; - : pf
3 /mimātha/
3 mīmite, mīmāti R māhi' imp. mammātur
s āmāsi
+ miθ rob : mith alternate (—) - : 1,2; R : -; - : pf
R /maist/
1 mellhamas, methete
2 mithaṭ f. du.
+ mru speak : brũ speak (=) 2:2; --; --
2 /mraumil/
2 bruviti
+ mruć dive : mruć set (=) 1:1; --; --
1 /mraucans/ ptc
1 mrućati AV
— nad abuse :
1 /nadant-1 ptc
— narp wane :
6sə /nrufsati/
+ 'nas/ans attain : naś /aimś/aś/nakś attain (+) 4:1,5sa; R,s:R; -:pf
4 /ansya/ imp
R /asyāl/ opt
s /naśāmal/ sub
1 nāsati
R ṣaṭ (asyāl ḥaṣṭa M) anāmsa
5 anōli
sa nakošati
Ved. nakṣati from an s-enlargement of the root. Perhaps the starting point was a sa-subjunctive, which was probably already PII because of /naśāmal/.
+ 2nas disappear : naś disappear (+) 4:4,1; a(r) : r; pf : pf
4 /nasyant-/ a (red) /anamsa/ nanāsa
4 nasyati (red. áninaṣati)
nanāsa
1 nāsati
+ ni lead : ni lead (=) - : 1; s : s; - : pf
s /naiṣati/ sub
1 nāyati
s naiṣta 2p, nēsāl nināya
+ par fill : pē/prā fill (=) 6n : 6n,9,3; - : R; - : pf
6n /prnāl/
9 pṛṇāti
R pūrdži paprāu
6n pṛṇādi
3 pīpāti
. On the s-aor. see Narten 173.
+ par cross : pṛ pass (—) - : 3; a : s; --
3 pīpāti (s pārṣati sub)
+ pā protect : pā protect (=) 2:2; --; --
2 /pāt/
2 pāti
— piś see?:
4 /piyanti/
— rah alienate:
INT /raḥr̥̄̄yang/ 
CS /rāhāyan/>
— rap support: 
1 /rapā/ imp 
— raś damage: 
CS inf /rāsahahair/
  + rā grant: rā give (=)  - : 3;  s : s;  - : pf 
     s /rāhahai/ sub 
  3 ririhi imp  s ārāsata, rāsat  rarimā 
     + rād accomplish: rādh succeed (=)  - : 3;  R : R;  - : pf 
         R /rādat/ sub 
         R rādhat sub  rarādha 
— rāθ cling to:
  2 /rāstī/ 
— riθ pervade?
va /raithvan/ ptc.
  + rud lament: rud weep (—)  (cs) : 2;  s : a;  — 
CS /rudayata/  s /raustal/ 
  2 rōdīti  a ārūdi (once) AV 
  + rud hold back: rudh obstruct (—)  3 : 7;  - : R,a;  — : pf 
  3 /rurauṣt/ 
  7 runādhmi  R arudham  rurūdhtita 
        a arudhat 
  ? rup cause pain: rup break (?)  (cs) : 4  - : red;  — 
CS /rupayanti/ 
  4 riṣyati (B.)  red ārūrupat AV 
  ? sac learn:? šak be able (—)  4 : 5  - : R  - : pf 
  4 /saṣyaṣṭha/ 
  5 šaknōti  R šākat sub  šaṣṭa 
The lack of agreement might indicate that the roots are not cognate.
  + sand seem, please: chand seem (=)  - : 2;  s : s  - : pf 
     s /sāns/ 
  2 chántsī  s āchān  caχhanda 
  + sanh announce: šaṁs praise (=)  1 : 1;  R : R;  — 
  1 /sanhati/  R /saḥyāt/ opt 
  1 šaṁsati  R šaṣṭā 2 pl 
— sar unite:
  1 /sarantai/  s /sār̥̄̄ṭa/ 
  ? sā cut down:? chā cut off (±)  4 : 4;  s : -;  — 
  4 /syadvam/  s /sādvam/ imp 
  4 chyāti AV
+ sāh teach : sās order (=)  2 : 2;  a : a(R);  - : pf
2 /śāst/  a /śiśāl/ opt
2 śāsmi  ? R śāsas sub śaśāsa
a śiśat

sūḍa see syazd
+ spas perceive : paś, spaś see (±)  4,5 : 4;  - : R;  - : pf
4 /spasyāl/ ind
5 /spāṣnuśa/
4 pāṣyati  R āśpaśa paspaśē
+ sru hear : śra hear (=)  5 : (5);  R,s : R;  - : pf
5 /sravant/-  R /asru(े)dvam/
  s /sravānai/
5 śrūṭti  R āśrūṭa śūrāvā
+ stā stand : sṭhā stand (±)  1r : 1r;  s : R,a;  - : pf
1r /xŚṭṭ/  s /stāṭat/
1r tiṣṭhāti  R āṭsthā tāsthau
a āṭthāt AV

+ stu praise : stu praise (=)  2 : 2;  - : s;  - : pf
2 /śāũmī/
2 stāṭī  s āśtoṣṭa tūṣṭāva
+ sū strengthen : śū swell (±)  aya : aya;  - ;  - : pf
aya /suvaṇya/? inf
aya śuāvant-
  śuśuvūr
+ suc flame : s uc gleam (?)  cs : cs;  - ;  - : pf
CS /saucayat/
CS śocayati  śuśōca
— syazd retreat :
4 /siruṣyaśa/  R /syazdat/ sub
+ śi dwell : kṣi dwell (=)  2 : 2,1;  - : s;  -
2 /śaṭtī/
2 kṣēti  s kṣēsas sub
1 kṣāyati
+ śyu activate : cyu move, stir (=)  1 : 1;  - : s;  - : pf
1 /śyavatī/
1 cyāvate  s acyosta cucyunē
+ tar overcome : tṛ, tūrva- overpower (=)  va(ya) : va;  - ;  -
va(ya) /tav(ay)āma/?
tārvati

If the emendation to /tārvāma/ is correct, the stem agrees with Skt. In any
case /tārvāyāma/ presupposes a stem *tārva-.
+ taś shape : takṣ fashion (=)  2 : 2(static);  a : a;  pf : pf
2 /tāṣṭ/  a /tāṣṭa/ /tālaśa/
2 tāṣṭi  a tākṣaṇi /tālàkṣa/
+ tū be able: tū be strong (=) 2 : 2; - -; - : pf
2 /tvā/ sub
2 tāvīti
+ ṭrā protect: trā rescue (=) 4 : 4,2; s : s - : pf
4 /ṭrāyādāyā/ inf s /ṭrāzdāva/
4 trāyase s trāsate sub ṭatvē
2 trāsva imp .
— ṭru nourish:
   s /ṭrauśta/
— ṭvars shape:
   s /ṭvārzdāva/
— ṭvi frighten:
1 /ṭvayahi/
+ vac say: vac say (=) - : 3; a : a; pf : pf
   a /vaucai/ a ávocat /vauxmala/
3 vīvakti
   a úvocat /vācā, vavāca
— vaf eulogize:
4 /ufyā/
+ vaina- observe: vena- observe (=) 1 : 1; - -; -
1 /vainahi/
1 vēnati
+ vah be dressed: vas wear (=) 2 : 2; - : ḫ; - : pf
2 /vastail/
   vāste (ń ḫ āvastiṭā) vāvasē
+ van overcome: vanā win (=) 1 : 1,6,8; s : R,s; pf : pf
1 /vanānti/
   s /vāns/ /vauṇarī/
1 vānati R vāṅsva imp
8 vāndti R vāmsat
6 vāndti
— van? wish:
Or adj. /vanu-/ /vauṇuś/ ptc?
+ vanc jump: vānc move crookedly (?)
Only pass. pres. /vaśvatai/.
— vap scatter; snatch away; cut down
1 /vapti/ + var choose: ṭv choose (=) 9 : 9; R : R; - : pf
9 /vānti/ R /varta/
9 vāṇītē R ávri, ávta vavṛmāhe
— var turn:
5 /vānvatai/ sub a /vāravatāi/ sub ?
— var lock in? join, couple?:
   R /vārāni/ sub
+ **vard** grow : **vṛdh** grow (=) 1 : 1; - : a; - : pf
1 /vardati/
1 vārdha /a ávṛdhya/ vavārdha
— **varz** work
4 /urzyat/  R /varzīma/ /vārurzai/
1 /varzati/

+ **vas** wish : **vaś** desire (=) 2 : 2, 1, 3; - -; - : pf
2 /vasmi/
2 vaśa vāvaśir
1 vaśanti
3 viśanti

+ **vat** understand : **vat** apprehend (+) (cs) : 1(cs);  R? : -; --
CS /vātayāmahi/ R? /-api/vatil inj. M.
1 vātama

CS vātayati
+ **vaxṣ** grow : ukṣ, vaks grow (+) 4(cs) : 1, 6(cs);  R : iṣ; - : pf
4 /uxṣyatil/  R /vaxṣśilt/
CS /-uxṣyantil/-
1 ukṣanta- (iṣ áukṣīṣ) vavakṣa
6 ukṣāmāna-
CS ukṣāya-
+ **vid** know : **vid** know (=) - 2?; - -; pf : pf
2? vidmās?
+ **vid** find : **vid** find (+) 1, 7 : 6n, 2; a,s : a,(s); - : pf
7 /vinastil/  s /vaiḍadvam/
1 /vaidadvam/ a /vidat/
6n vindaṭi a ávidat vivēda
2 vidé (s aviti)
The Sanskrit s-aor. is an independent innovation.
+ **vid** distribute, serve : **vidh** satisfy (=) - -;  a : a; --
7 /vidaṭatil/ sub
a vidhāt

+ **vis** sich bereitstellen : viś enter (=) 6 : 6; - : R,s; - : pf
6 /visantai/
6 viśāti  R. viśātan vivēsa
s áviśaṁahi
+ **viṣd** raise (a weapon) : **vid** make firm (—) 1 : aya; - -; --
1 /vaiṣdatil/
aya viṣyati (Mayrh. s.v. viḍūḥ)
+ **vraj** walk : uraj proceed (?) - 1;  s : (i)s; - : pf
s /urāxśatil/ 3 pl
Narten 251 considers avrajīṭ as an old s-aorist of a set root. — vrā́z be glad:

\[\text{+ xrap angemessen sein } : klp \text{ be adapted (±) 1 : 1; - ; - : pf}\]

\[\text{+ xrud make/become afraid : krudh be angry (—) - : 4; R : a; - R/xraudatl sub}\]

\[\text{krūḍhyati a krudhas}\]

\[\text{+ xrus scream : krus cry out (=) 1 : 1; - ; sa; -}\]

\[\text{+ xsā observe : kśā reports (—) - : 2; a : -; - : pf}\]

\[\text{a/xsaṟāil}\]

\[\text{2 kśāti cakṣe}\]

\[\text{+ xsā rule : kśā rule, possess (±) aya : aya; a : - ; - aya/xšayahīl a/xšaitāl opt}\]

\[\text{aya kṣāyati}\]

\[\text{+ xšnā get to know : jnā know (=) 9 : 9; - : R,s; - : pf}\]

\[\text{9 jānta} \text{ imp}\]

\[\text{9 jānta} \text{ imp}\]

\[\text{R jñeyās jajnāu}\]

\[\text{s ājñāsthās AV}\]

\[\text{— xšnu satisfy :}\]

\[\text{2/xšnauṣal opt s/xšnauṣīl}\]

\[\text{sa/xšnausāmna- ptc}\]

\[\text{+ yam hold : yam hold (=) sk : sk; R : R,s; - : pf}\]

\[\text{sk/yasail R/yanta} \text{ inj M}\]

\[\text{sk yācchatā}\]

\[\text{R āyamur yayāma}\]

\[\text{s āyāmsam}\]

\[\text{+ yat line up : yat place (in the right position) (=) - : 1; - ; R; pf:pf}\]

\[\text{1 yātāti R yātānā-yetirē}\]

\[\text{+ yaz adore : yaj sacrifice (=) 1 : 1; - ; s; - : pf}\]

\[\text{1/yazalāi}\]

\[\text{1 yājāti s ayaśta M ījē, (yējē AV)}\]

\[\text{+ yā long for : yā request, implore (±) 3,sk : 3,2; - : sīṣ; -}\]

\[\text{3/iṣāl}\]

\[\text{sk/yāsāl}\]

\[\text{3 iye}\]

\[\text{2 jāti sis ayāsiṣam}\]
18. Reverse index of verbal roots

18.1. Reverse index of Gāthic verbal roots

\[
\begin{align*}
1^a \text{dā} & \quad \text{give, put} & 1^a \text{mard} & \quad \text{destroy} & 1^a \text{ah} & \quad \text{be} \\
2^a \text{dā} & \quad \text{distribute} & 2^a \text{mard} & \quad \text{neglect} & 2^a \text{ah} & \quad \text{throw} \\
3^a \text{dā} & \quad \text{bind} & 3^a \text{vāc} & \quad \text{distract} & \text{vād} & \quad \text{distract} \\
\text{gā} & \quad \text{vānc} & \text{bud} & \quad \text{bide} & \text{rhā} & \quad \text{throw} \\
\text{mā} & \quad \text{marc} & \text{wād} & \quad \text{wade} & \text{vād} & \quad \text{wade} \\
\text{xśā} & \quad \text{mruc} & \text{zād} & \quad \text{zade} & \text{vād} & \quad \text{zade} \\
\text{pā} & \quad \text{suc} & \text{xiřd} & \quad \text{xirde} & \text{san} & \quad \text{san} \\
\text{rā} & \quad \text{ad} & \text{sīzd, syazd} & \text{syazd} & \text{san} & \quad \text{san} \\
\text{srā} & \quad \text{had} & \text{vižd} & \text{vižd} & \text{san} & \quad \text{san} \\
\text{sā} & \quad \text{nad} & \text{maržd} & \text{maržd} & \text{ci} & \quad \text{ci} \\
\text{xśā} & \quad \text{rad} & \text{sižd} & \text{sižd} & \text{ci} & \quad \text{ci} \\
\text{stā} & \quad \text{frād} & \text{vaf} & \text{vaf} & \text{di} & \quad \text{di} \\
\text{yā} & \quad 1^a \text{vid} & \text{know} & \text{hī} & \text{hī} & \quad \text{hī} \\
\text{zā} & \quad 2^a \text{vid} & \text{find} & \text{g cf. j} & \text{ji} & \quad \text{jī} \\
& \quad 3^a \text{vid} & \text{distribute} & \text{māng} & \text{māng} & \quad \text{māng} \\
\text{dab} & \quad \text{sand} & \text{drāng} & \text{drāng} & \text{thāi} & \quad \text{thāi} \\
\text{grab} & \quad \text{ard} & \text{aug} & \text{aug} & \text{zi} & \quad \text{zi}
\end{align*}
\]
<table>
<thead>
<tr>
<th>Verb</th>
<th>Root</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bi</td>
<td>xrap</td>
<td>iš</td>
</tr>
<tr>
<td>jī</td>
<td>vap</td>
<td>dis</td>
</tr>
<tr>
<td>nī</td>
<td>āp</td>
<td>vis</td>
</tr>
<tr>
<td>frī</td>
<td>narp</td>
<td>dars</td>
</tr>
<tr>
<td>ḫ</td>
<td>rup</td>
<td>ḥvars</td>
</tr>
<tr>
<td>j cf. g</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ḫaj</td>
<td>ar</td>
<td></td>
</tr>
<tr>
<td>ḫraj</td>
<td>bar</td>
<td>raš</td>
</tr>
<tr>
<td>ḫarj</td>
<td>dar</td>
<td>taš</td>
</tr>
<tr>
<td>ḫruj</td>
<td>kar</td>
<td>'iš desire</td>
</tr>
<tr>
<td>ḫuṣ</td>
<td>mar</td>
<td>2iš urge</td>
</tr>
<tr>
<td>ḫk see c</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ḫgam</td>
<td>sar</td>
<td></td>
</tr>
<tr>
<td>ḫyam</td>
<td>tar</td>
<td>guš</td>
</tr>
<tr>
<td>ḫyan</td>
<td>'var</td>
<td>būš</td>
</tr>
<tr>
<td>ḫyam</td>
<td>'var</td>
<td>daxš</td>
</tr>
<tr>
<td>ḫban</td>
<td>'var</td>
<td></td>
</tr>
<tr>
<td>ḫhan</td>
<td>dvar</td>
<td>vaxš, uxs</td>
</tr>
<tr>
<td>ḫjan</td>
<td>hvar</td>
<td>val?</td>
</tr>
<tr>
<td>ḫjan</td>
<td>zar</td>
<td>yat</td>
</tr>
<tr>
<td>ḫman</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ḫvan</td>
<td>nas</td>
<td>attain</td>
</tr>
<tr>
<td>ḫvan?</td>
<td>nas</td>
<td>disappear</td>
</tr>
<tr>
<td>ḫhap</td>
<td>spas</td>
<td>rāθ</td>
</tr>
<tr>
<td>ḫrap</td>
<td>vas</td>
<td>miθ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>riθ</td>
</tr>
</tbody>
</table>

18.2 Total number of roots in:

<table>
<thead>
<tr>
<th>k,c</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>3</td>
</tr>
<tr>
<td>t</td>
<td>3</td>
</tr>
<tr>
<td>p</td>
<td>7</td>
</tr>
<tr>
<td>s</td>
<td>11</td>
</tr>
<tr>
<td>r</td>
<td>15</td>
</tr>
<tr>
<td>i</td>
<td>8</td>
</tr>
<tr>
<td>a</td>
<td>15</td>
</tr>
<tr>
<td>g,j</td>
<td>3,5</td>
</tr>
<tr>
<td>d</td>
<td>21</td>
</tr>
<tr>
<td>b</td>
<td>2</td>
</tr>
<tr>
<td>z</td>
<td>8</td>
</tr>
<tr>
<td>m</td>
<td>2</td>
</tr>
<tr>
<td>u</td>
<td>6</td>
</tr>
<tr>
<td>n</td>
<td>7</td>
</tr>
<tr>
<td>f</td>
<td>1</td>
</tr>
<tr>
<td>s</td>
<td>11</td>
</tr>
<tr>
<td>h</td>
<td>8</td>
</tr>
<tr>
<td>θ</td>
<td>4</td>
</tr>
<tr>
<td>h</td>
<td>8</td>
</tr>
<tr>
<td>n</td>
<td>7</td>
</tr>
</tbody>
</table>

\[\text{THE VERB} \quad 217\]
Roots that ended in a laryngeal are:
those in -ā, -ī, -ū;
those in -θ;
1par, 1var choose, zar;
han, kan, 1van win;
au/ū, dau/du.
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.

*aẹ̄sasa-* and *aẹ̄sa-*: invert
*ạh- lạ̄hva/* 1 du. imf.
Add: *aḥ- throw; root aor. ah-
   *as /as/* 2 sg. inj. 34.8a, c
   *aghāt /ahāt/* 3 sg. sub. 44.19d,e
*ạnhayạ̄*: aghayạ̄; s.v. hāḷy)-: s.v. hā(y)-
ạghu- /ahwạ̄h/*
*ạpọ̄ma-* after a. add: apivaiti see vai-
ar- pres. *īṛ-*, īra-: delete *īṛ-,* read īr-, īra-
paiti. *ṛīṭi* inf. or noun
   *ḷūz ịṛḍyạ̄ịḷ*
add: *uṛvạ̄ṇē /rvanail/* inf.?
ạṣa- read arta- everywhere, also in the-following words
*ạṣavan-* ạṣaonọ̄: ạṣāunō
   ạṣaunọ̄: ạṣaonō
ạṣi- ạṣịś
avā to, towards: down, off
aẓọ̄m aẓē: aẓō
azi-: azi-
ā 43.3d delete (2 ×); reconstructed in other forms (avaēnata, forms of i-)
ā. hōiđ̣ạ see hā-: see ā. hōiđ̣ạ- and hi- (invert with ā. hōiđ̣ạ-)
ạịđ̣i- ạịđ̣ịśc̣ịś
ā. manạghā-: ā. manạgha-
ạ̄ṛẓva- /ạ̄ṛẓạvaḷ
ạ̄ṛmaṭọịś
ā. sə̣nda-: ā. sə̣nda-
āz- /īzya/-
būri-: būri- (to be placed before būj-); gen. sg. n.
cịś- cịnas delete 32.5c
   *cviṣ́i* 3 sg. pass. aor.
   *cviṣ́tā* 2 pl. inj. aor.
cịṭ- add: cịnas 32.5c
dab- /dhnauta/?
   dạ̄bayaeti 3 sg. ind.
daēnā- /dyanā-/
CORRECTIONS TO THE INDEX GIVEN BY MONNA

daršti- /dəʃtaiʃ/  
dā- Aor. imp. dā(s-): Aor. inj.  
    Pres. ptc.: Aor. ptc.  
damī- damīm  
dabqaz- pres. dabqaz-; 3 sg. ind. pres.  
dājū, arā- /djetarta-/  
dī- dōišā 1 sg. subj.  
    dōiši 2 sg. imp.  
dušrābhī- acc. pl. m.  
duždaēna- put before duždāh-  
ūvā read: adv. down  
rāthwa- rāthwō  
visti-  
frā delete frā, fora: delete 30.5c, 49.8d  
frāxšnīn- m.: or n.  
frāxšnōna- adj.: acc. sg. n.  
fri-  
fsrātū- /fsratuam/  
gam- jānghaticā  
gorz- jigeraz- (twice)  
grōham- Ins. grōhmah- n. wealth, adj. rich (*grōhmā for grōhmā)  
hac- scantu imp. root aor.  
    haxsāi s-aor.  
haurv(at)āt- haurvāscā  
hāra- before h. insert: hāma- see hama-  
i- åyō see yā-  
idūm see yā-  
/ā yantam/  
    add: see iša-  
is- delete isōyā, ismnō  
'īš-, ʾiš-, ʾiš- read as follows:  
'īš- desire: pres. isa- (Skt. icchāī)  
    isōyā /isayal/ 1 sg. opt. med. 43.8b  
    ismnō /isamnah/ ptc. 46.6a  
  ʾiš- set in motion;  
    pres. iša- (Skt. āše)  
    išāntī /išāntī/ 3 pl. ind. 46.9e  
    išāl /išāl-/ 3 sg. sub. 44.2c  
    išānti /išāntī/ 3 pl. sub. 45.7a  
    pres. išya- (Skt. āṣyātī)  
        fraššyā /fra išyāl/ 1 sg. ind. 49.6a  
  iša- desid. of i- go (Skt. āṣati); *Hi-Hi-sa-.
CORRECTIONS TO THE INDEX GIVEN BY MONNA

išāba /išaba/ 2 pl. ind. 45.1b
išantō /išantah/ ptc. 30.1a, 47.6d
išya- išyam 51.7b: 17b
jōya-
ka- kō 29.1d: 1a; 44.5b/d: 5bcd; 46.14a/b: 14b; 49.5c: delete 5c
da delete 28.5a, 48.2c, 50.1a (see s.v. kā)
kalāra- before k. add: kāj interrog. particle 28.5a, 48.2c, 50.1a
ma- mah'yā /mahyah/
manah- manahicā
marška-
marxtar-
maša- replace: mašā 29.11a, read *mām *ašā Ins.
mazdā- mazdācā nom. pl.: sg.
,, voc. pl.: sg.
māh- /maah/
mābrān-
mārc- mārgoduyē /mrgdvail/ delete (subj.)
māth- māist: māist
mosū /mašū/ cal
nas- delete: red-aor. nasa-
  nasat /nasat/ 3 sg. sub. root aor.
pouruya- pouruyē 44.11a: 11d
paru- delete; add after par-: paro- see pouru-
  pouru- pourū /pṛūw/ /p̣uw/
  par- /fəraul/
  rah- /ra:ʃyaanti/, /ra:ʃyaan/
  rārāa- /ra:ʃah/
  sōnghu-
  spitama- /spitamāahl/
  sru- sraošānē pres.: aor.
    sruyē delete: (or...med)
syazd- /siʃdyammā/
syaošana- ašyaufna- everywhere
θru- θrhošta 2 pl: 3 sg. med.
urvan- urvanē add: Hu. inf. of ar-
  urvāz- med.: act.
  urvāzā /urvāzā/
  uṣṭi- /uṣṭiʃ/
  var- /vartā/ twice, /varmadi/
vasah- after v.add: vasā, -ā adv. at will
  vasā /vasah/ 43.1b, 50.9c
  vasā ,, 31.19b, 32.15b
važdra-
vorozňa- vorozňah’yā delete 46.1c and add 46.1c to vorozňa

vid- read: pres. vinad-, vaeda-, intens. voivid-, s-aor. vīda-, s-aor. vōis-
   add: vōizdyāi inf. s-aor. 43.13c

vū- read: pres. viša-
   subj.: ind. pres. (twice)

xsă- āxsō med.: act.

xšā- xšayshī: -ehī
   xšōntā subj. pres.: inj. aor.
   xšnlam pres.: aor.

xšnā- pres. zān-: zānā/-zān-

xvāēta- /hvaiitah/
xvāpaibya- /hvapabyāt/
xvili- xviličā

yam- *hām. yāsaite /ham yasatai/

yā- add: red. pres. /r-/
   āyōi lā iʔail 1 sg. ind. 31.2b
   idūm /idvam/ 2 pl. imp. 33.7a

yauzdāh- read: yaozdā-

yuj- read (only): aor. yaglj-, yuglj-

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

<table>
<thead>
<tr>
<th>Text</th>
<th>Phonemic transcription</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>a; ā sometimes (no rule)</td>
</tr>
<tr>
<td>ā</td>
<td>ā; ā sometimes (no rule)</td>
</tr>
<tr>
<td>ā (≈ ā)</td>
<td>ā?ah (huḍābyō)</td>
</tr>
<tr>
<td>ānt</td>
<td>ā?ant</td>
</tr>
<tr>
<td>āṅh</td>
<td>āṅ</td>
</tr>
<tr>
<td>-ā</td>
<td>-āh; -āu (xrātā, pṛṛtā)</td>
</tr>
<tr>
<td>ās</td>
<td>ās</td>
</tr>
<tr>
<td>ā</td>
<td>an before s, z, θ</td>
</tr>
<tr>
<td>ā</td>
<td>ā before -m, -n</td>
</tr>
<tr>
<td>ā</td>
<td>ā before m, -n (rarely)</td>
</tr>
<tr>
<td>a</td>
<td>ā before nm</td>
</tr>
<tr>
<td>āṛś</td>
<td>āṛś</td>
</tr>
<tr>
<td>b, β</td>
<td>b</td>
</tr>
<tr>
<td>ā</td>
<td>ā</td>
</tr>
<tr>
<td>ā</td>
<td>ā</td>
</tr>
<tr>
<td>ā</td>
<td>ā before y before i, ē, y, ē or j in the next syllable</td>
</tr>
<tr>
<td>ā</td>
<td>-ai</td>
</tr>
<tr>
<td>ā</td>
<td>-yā (paouryē /parviyāl)</td>
</tr>
<tr>
<td>ā</td>
<td>āi</td>
</tr>
<tr>
<td>ā</td>
<td>i (zāmō), u (drгоvant)</td>
</tr>
<tr>
<td>āṃ, ām</td>
<td>āṃ, ām</td>
</tr>
<tr>
<td>C&amp;Ç</td>
<td>C&amp;Ç</td>
</tr>
<tr>
<td>āvi</td>
<td>āvi (āi in cāviś-)</td>
</tr>
<tr>
<td>āra</td>
<td>r</td>
</tr>
<tr>
<td>āḥ-</td>
<td>zero</td>
</tr>
<tr>
<td>-ā</td>
<td>zero (rarely)</td>
</tr>
<tr>
<td>ā</td>
<td>ā (xyōm, strōm-); a (uśtā, vātēyāmahi)</td>
</tr>
<tr>
<td>āḥ-</td>
<td>zero</td>
</tr>
<tr>
<td>āḥ-</td>
<td>ah (rarely)</td>
</tr>
<tr>
<td>āṃ, ān</td>
<td>āṃ, ān</td>
</tr>
<tr>
<td>āṅgh</td>
<td>see sub g</td>
</tr>
<tr>
<td>-āṅgh</td>
<td>see sub g</td>
</tr>
</tbody>
</table>
INDEXES

\( \ddot{u} \)  au
\( -\ddot{o} \)  -ah
\( -r\ddot{o} \)  -r

\( f \)  f

\( g \)  g
\( \ddot{\text{ng}}h \)  anh
\( -\ddot{\text{ng}} \)  -anh
\( \text{nghv} \)  hv
\( \text{ngr} \)  \( h\)r (angra-, dangra-)

\( \gamma \)  g
\( \eta \)  h
\( \ddot{\text{ng}}h \)  see sub g
\( \eta' \)  see \( \dot{x} \)
\( \eta^v \)  see \( x^v \)
\( i \)  \( i; \ddot{i} \) sometimes (no rule)
\( \ddot{i} \)  \( \ddot{i}; \ddot{i} \) sometimes (no rule)
\( j, k, l \)  j, k, l
\( m, n \)  m
\( n \)  n
\( \ddot{\text{ng}}(h) \)  see sub g
\( \acute{n} \)  nh
\( \eta \)  anh
\( \ddot{\eta} \)  \( \ddot{\eta} \)h
\( \eta h, \eta h, (n)ghv hv \)
\( \ddot{\alpha}(n)h \)  anh
\( \acute{y} \)  \( \acute{y} \)he
\( \dot{y} \)  hai

\( \nu \)  not Gathic

\( o \)  a (after labial before a syllable with u)
\( a o \)  au
\( \ddot{\text{o}} \)  a (no rule); \( \ddot{\alpha} \) (rarely); zero (for \( s, \dddot{s} \); irregular)
\( \ddot{\text{oi}} \)  ai
\( \ddot{\text{o}}ya \)  aya
\( -\ddot{\alpha} \)  -ah; -\( \alpha \) (fr\( \ddot{o} \), ap\( \ddot{o} \), av\( \ddot{o} \)); -\( \alpha \) (in split words); -\( \ddot{\text{au}} \) (pot\( \ddot{t} \)o)

\( p, r, s \)  p, r, s
\( \acute{s} \) ( = \( \ddot{s} \))  \( \ddot{s} \)
\( \ddot{s} \)  \( \ddot{s} \)
\( \ddot{s} \) ( = \( \ddot{s} \))  \( \ddot{\text{h}}, \ddot{\text{rr}} \)
\( l, \ddot{l} \)  l
\( \Theta \)  \( \ddot{\theta} \)

\( u \)  u; \( \ddot{u} \) sometimes (no rule)
\( \ddot{u} \)  \( \ddot{u}; u \) sometimes (no rule)

\( v \) ( = uu)  v; u? (no rule)

\( w \)  see \( \beta \)
2. From the transcription to the text

phon. transcr. text

\(a\)  
\(a; \dot{a}\) sometimes (no rule)
\(e\) (after \(\gamma\) before \(i, \dot{e}, \gamma, o, j\) in the next syllable)
\(o\) (after labial before \(u\) in the next syllable); \(\ddot{o}\) (rarely)
\(\ddot{o}\) (\(\ddot{u}\ddot{a}, \ddot{u}\ddot{a}\ddot{y}\ddot{a}\ddot{m}\ddot{a}\ddot{h}\ddot{i}\))

\(-a\)  
\(-\ddot{a}\) (\(f\ddot{r}, \ddot{a}\ddot{p}, \ddot{a}v\ddot{o}\))

\(a\ddot{a}\ddot{a}\)  
see \(\ddot{a}, \ddot{a}\) (\(\ddot{h}\ddot{u}\ddot{d}\ddot{a}\ddot{b}\ddot{y}\ddot{o}\ddot{d}\ddot{h}\ddot{a}\))

\(a\ddot{r}\ddot{a}\ddot{n}\ddot{t}\)  
\(\ddot{a}\ddot{n}\ddot{t}\)

\(a\ddot{h}\)  
\(\ddot{a}\ddot{h}\) (before consonant; rarely)

\(-a\ddot{h}\)  
\(-\ddot{a}\ddot{h}\); \(\ddot{o}\) (rarely)

\(ai\)  
\(a\ddot{e}\) (mostly in open syllables); \(\ddot{o}\ddot{e}\) (mostly in closed syllables); \(\ddot{e}\); \(\ddot{o}v\ddot{i}\) (\(c\ddot{o}v\ddot{i}\ddot{r}\ddot{-}\))

\(a\ddot{m}, a\ddot{n}\)  
\(\ddot{a}\ddot{m}, \ddot{a}\ddot{n}\); \(\ddot{a}\) (before \(s, z, \theta\))

\(a\ddot{h}\ddot{h}\)  
\(\ddot{a}\ddot{h}\ddot{h}\)

\(-a\ddot{h}\)  
\(-\ddot{a}\ddot{h}\)

\(a\ddot{m}, a\ddot{n}\)  
\(a\ddot{m}, a\ddot{n}\) (rarely)

\(-a\ddot{m}, -a\ddot{n}\)  
\(-a\ddot{m}, -a\ddot{n}\)

\(a\ddot{n}\ddot{m}\)  
\(a\ddot{n}\ddot{m}\)

\(a\ddot{s}\)  
\(a\ddot{s}; a\ddot{s}\) (rarely)

\(-a\ddot{u}\)  
\(-\ddot{a}\ddot{u}; -\ddot{a}, -\ddot{o}\) (rarely)

\(-y\ddot{a}\)  
\(-y\ddot{a}\); \(y\ddot{e}\) (\(p\ddot{a}u\ddot{u}r\ddot{u}\ddot{y}\ddot{e}\ddot{h}\))

\(b\)  
\(b; \beta\) (after \(\theta\); before \(\ddot{z}\))

\(c\)  
\(c\)

\(d\)  
\(d; \delta\) (after \(x, f\))

\(f\)  
\(f\)
<table>
<thead>
<tr>
<th>Indexes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>g</td>
<td>g; ñ (before ź)</td>
</tr>
<tr>
<td>h</td>
<td>h</td>
</tr>
<tr>
<td>-hai</td>
<td>-ññe</td>
</tr>
<tr>
<td>hr</td>
<td>ngr (angra-, dangra-)</td>
</tr>
<tr>
<td>hv</td>
<td>ñhv, ñhu, ñuh, (n)ñhv; xy (rarely)</td>
</tr>
<tr>
<td>hv-</td>
<td>xy</td>
</tr>
<tr>
<td>hj-</td>
<td>hj</td>
</tr>
<tr>
<td>i</td>
<td>i; ï sometimes (no rule); ñ (zamnó)</td>
</tr>
<tr>
<td>iyam</td>
<td>iyam, ím</td>
</tr>
<tr>
<td>i</td>
<td>i; i sometimes (no rule)</td>
</tr>
<tr>
<td>j, k, l</td>
<td>j, k, l</td>
</tr>
<tr>
<td>m</td>
<td>m; μ (after h)</td>
</tr>
<tr>
<td>n</td>
<td>n; n (before i, y); n (before stop)</td>
</tr>
<tr>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>r</td>
<td>r</td>
</tr>
<tr>
<td>CrC</td>
<td>CoraC</td>
</tr>
<tr>
<td>Crnš</td>
<td>Coraš</td>
</tr>
<tr>
<td>ɾ, -rt</td>
<td>ɾ ( = ɾ)</td>
</tr>
<tr>
<td>-ɾt</td>
<td>hr (before k, p)</td>
</tr>
<tr>
<td>-ɾ</td>
<td>-ɾd</td>
</tr>
<tr>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>ſ</td>
<td>ſ ( = ſ)</td>
</tr>
<tr>
<td>š</td>
<td>š</td>
</tr>
<tr>
<td>t</td>
<td>t; ț (word finally except after s, š)</td>
</tr>
<tr>
<td>ñ</td>
<td>ñ</td>
</tr>
<tr>
<td>u</td>
<td>u; ù sometimes (no rule); ñ (dragvant-)</td>
</tr>
<tr>
<td>uʔ</td>
<td>u</td>
</tr>
<tr>
<td>huʔ</td>
<td>hv-; xy- (sometimes)</td>
</tr>
<tr>
<td>ù</td>
<td>ù; u sometimes (no rule)</td>
</tr>
<tr>
<td>v</td>
<td>v ( = uu)</td>
</tr>
<tr>
<td>-vai</td>
<td>-vai, uyé</td>
</tr>
<tr>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>y</td>
<td>y ( = ų)</td>
</tr>
<tr>
<td>z, ź</td>
<td>z, ź</td>
</tr>
</tbody>
</table>
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 á å a b β c d ð e ê e æ æ e ø f g h i í j k l m n y o l o ſ s t ð u ú u w x x y z Ž. Note that á follows a, but that with the other vowels length is disregarded.
INDEXES

ap- 113f
apauvum / apavum/ 99
apayati / apayati/ 200
apā / apā/ 144, 148
apānā- see āp-
apāvati see val-
apō / apō/ 33
ar- 204; pres. āra- 166, 170
irātā / iratā/ 84, 152
aor. ār- 176
ārsom / āram / or / āram/ 26, 84, 151
ārsom lārsvāl or lā rsvāl 3, 24, 175
pf. ār- 187
ārōś / ārāś/ 152, 198
pres. / ār- 166
uzirindāyā / uzirindāyā/ 3, 24, 84, 89, 152, 196f
pātē see s.v.
ārōd- 204; aor. ārōd- / ārod/- 176
ārōj- 204; pres. ārōja- / āraj- 169
ārōm / āram/ 144, 147
ārōm. plōsā / lārampōsā/- 107
ārśnavan-/ lārśnavan/- 94
ārśnavantī / lārśnavantī/ 25, 54
ās 151
āsān- asānā / lāsānā/ 121
āśāśi / lāśāśi/- 43
*āsna- asna-/ lāsna/- 136, 144, 147
āsnaṃ see āsan-
āspā- 98
āśrauti- 106
āstī- 86
āṣ- 77, 114
āṭyāh- 136
āṣa- lāṣa/- 57f, 67
āṣāī / lāṣāī/ 3
*āṣāśa / lāṣāśa/- 2, 4, 31, 49
āṣāśā / lāṣāśā/- 53
āsāśāśa / lāṣāśāśa/- 56
āsāvantīyantā / lārāṣāvantīyantā/ 41, 84, 107, 172
āṣā asājāh- / lāṣājāh/- 84, 108
āṣāvan- 57f, 67
āṣāva / lāṣāva/- 44
āṣāvan / lāṣāvan/- 54
āṣāvanā / lāṣāvanā/- 54
āṣi- / lāṣi/- 57, 59
āṣicā / lāṣicā/- 43f, 49
āṣivant-
āṣivā / lāṣivā/- 34
āṭ / lāṭ/ 144, 147
āṭā lāṭā/- 144, 148
āṭrā lāṭrā/- 144, 148
āuruna / āuruna/- 51
āuvant- / lāuvant/- 51
āv- 204; pres. āva- 169
āvā / āval/- 198
āvāi 199
uzītyāyī see s.v.
āva- 139
āvāpānā / lāvāpānā/- 107
āvāpastā / lāvāpastā/- 105, 200
āvarā / lāvarā/- 144, 148
āvaṭ / lāvaṭ/- 144, 147
āva, āvā / lāva/- 33, 144, 148
āvā / lāva/- 144, 149
āvāṭ see sā-
āyāh- 97
āyaś- ayāś / lāyaś/- 25
āyāś / lāyaś/- 101
āyōm 136
āyōm / lāyōm/- 26, 136
aṃ / lāṃ/- 204; pres. aṃ- 223
aṃā / lāṃā/- 75f
āzdā / lāzdā/- 74, 144, 148
āzdām / lāzdām/- 26
āzdā / lāzdā/- 28, 198

A

ā 144, 148
ādā- / jāde/- 114f
ādāśi- 105
ādāvyenti see div-
ādvā- 136
āh- 114
āghā lāhāh 19
ādīghā lāhāl 29
ā. kāyotā / lāhātā/- 36, 199; cf. hi-
āhitī-
āithṣi / lādhi/- 44
ākā / lākā/- 21, 144, 147
ākāstāng / lākās tankh/- 21
ā kṣrati- lākṛti/- 105
ā. mānegya- / lāmānegya/- 107
ā. māνaystrā see māνaystrā
ānus. hāk- / lānus. hāk/- 107, 113
ānus. hāx / lānus. hāx/- 81, 102
āp- 204; pf. āpa- 187
āpāna- / lāpāna/- (or lāpā nāh) 191, 194
ārōza- / lārōza/- 54
INDEXES

maidyāī. māgha- /Madyaṁāha- / 107

maṇīyāī.

maṇiṇīāā /manu?ah/ 2, 54, 90, 113

man- 209; pres. maṇya-, 171

maṇiṇīāā /manu?ata/ 46

aor. man- 176

aor. maṇgh- /maṅh-/ 183

maṇghī maṇghī /maṅhi/ 18, 82

caus. maṇya- 100, 172

maṇah- 95, 100

maṇaṅhā /maṇaṅhā/ instr. sg.

maṇaṅhō /maṇaṅhō/ 19

maṇahī /maṇahī/ 49, 82

maṇaṅhā /maṇaṅhā/- 99

maṇi vistā /maṇivaistsā/- 30, 106f

maṅ- (manj-) 209; class. mimaṭā /mimāṭa/- 189

mimaṭī /mimāṭā/ 16, 75

mantu- 27

maṛ- 209; pres. maṛa- 170

maṛc- 209; pres. maṛṅkī- /maṛṅkī/- 168

maṛṅgṛgyē /maṛṅgṛgyē/ 4

maṛgṛgyā /maṛgṛgyā/- 22

aor. maṛṅsī- /maṛsī/- 183

maṛṅgṛgyē /maṛṅgṛgyē/ 51, 95, 196f

maṛṛd- destroy 209; pres. mṛṛnda- /mṛṛnda/- 1, 24, 34, 168, 170

maṛṛd- neglect 209; aor. maṛṛd- /maṛṛd/- 176

maṛka- /maṛka/-markai ca/ 68f, 98

maṛśa- 67f

maṛśnā- /maṛśnā/- 61, 67f, 121

maṛc- 209; pres. maṛc- /maṛc/- 168

maṛṇgṛgyē /maṛṇgṛgyē/ 95, 196f

maṛṛd- 209; pres. maṛṛda- /maṛṛda/- 170

maṛṛdātā /maṛṛdātā/ 46

maś 145, 148

maṣya- 57, 61, 67f

maṣīṃ /maṣīṃ/- /maṣīṃ/- 53

maṭ /maṭ/- 82, 145, 148

maṇāni /maṇāni/- 119

maṇāti /maṇāti/- 44

maṇ- 115

maṇi /maṇi/- 28

maṇiśi maṇiśi/- 1, 51

maṇḍā /maṇḍā/- 80, 91, 114f

maṇḍām /maṇḍām/- 23

maṇḍā /maṇḍā/- 21

maṇḍāyāa- /maṇḍāyāa/- 172

maṇya- 136

ma- 209; pres. miṃa- /miṃa/- 166

miṃāba /miṃāba/- 43

ma /ma/- 145

ma neg. 145, 149

malı /maḷa/- 4, 21, 89, 118

maṅgrī /maṅgrī/- 23, 95

maṭrā /maṭrā/- 22, 73

maṭraṅ /maṭraṅ/- 91, 121

maṣā. raṣi /maṣāraṣi/- 44f, 104

maṅ /maṅ/- 145, 148

maṛṛdāka /maṛṛdāka/- 94

maṇ 200

miṭ- 209; aor. miṭ̣- /miṭ̣/- /maṭ̣/- 176

miṣ /miṣ/- 16, 102

mīrā /miṅā/- 16, 36

mīlāvačaḥ- /mīlāvačaḥ/- 108

miṣ- pres. minaț-?, miṣ- 168

minaț? 200

miṣūni /miṣūni/- 43

miṣē /miṣē/- 43, 80

miṣīsavant-

miṣīsavant /miṣīsavant/- 102

mīyāṣṭī. bārānā

ā. mīyāṣṭī. bārānā /ā. maṣṭri-/-bārānā/- 34

miśū maśīcā /miśī ca/- 32, 145, 148

miṛ- 210; pres. mṛava-, mṛu- 164

mṛuvē /mṛuva/- 89

mṛuotī /mṛuotī/- 85

pass. aor. mnaō /mnaō/- /mnaō/- 26, 41, 101, 188, 198

mṛuutē /mṛuutē/- inf. 198

mṛuc- 210; pres. mraostā /mṛaosta/- 170

N

nabāh- 72, 95

nadānī- 210

nači- /nači/- 37

nađā /nađā/- 37, 145, 148f

nunā /nunā/- 44, 145, 148

napāti- /napāti/- 49

napiya- /napiya/- 74, 99

nař- /nař/- 100

naṛṣ /naṛṣ/- 94

naṛṣ /naṛṣ/- 22

narpā- 210; pres. narpā- /narpā/- 75, 172

narpāṣī- /narpāṣī/- 43, 61, 67

nas- (nus-) 210; pres. asya- /asa/- 171

aor. nas- /nas- / as- 1- 177

fraśā /fraśā/- 176

frōyāt /frašyā/- 1, 33, 35

nasāj /nasāj/- 176

aor. naś /naś/- 183f

naśāmā /naśāmā/- 46, 158

naśē /naśē/- inf. 199

ā. dēyā /ā. dēyā/- 14, 74, 95, 197

nas- 210; pres. nasya- 171

aor. nasāj /nasāj/- 181

anasaŋ /anasaŋ/- 150
INDEXES

nasal /nand-/, /nans-/ 186
nādzītā- 80, 136
nādyah- /nādyah-/- 136
nāmāh-

nāmā /nāmāl/ 28
nāmaxānt-

nāmaxvānt /nāmaxvānt-/ 15
nāmā /nāmāl/ 198
nāt- 210; aor. nāt- /nāt-/ 183f
nāt /nāt/ 145, 148
nātā- 106
nāt /nāt/ 43, 145, 148
nāt /nāt/ 16, 36, 40, 145, 149
nāyā /nāyām/ 145, 148

ō

ōyā see ayān

P
pairī /parīt/ 145, 148
pairigātā- /pairigātā-/ 104, 108
paśtī /paśtīl/ 146, 148
paśtī- 71
paśtī /paśtīl/ 28
paśtī /paśtīl/ 199
paśtīyasī 16, 101
paśtīyasītīm /paśtīyasītīm/ 84
paśurīya- /paśurīa-/ 41, 93, 99, 143
paśuriya- /paśuriya-/ 32, 41
paśurūyē /paśurūyē/ 31
paś- fill 210; pres. paśma- /paśma-/ 168, 170
paś /paś/ 151, 186
paś- cross 210; aor. paś- /paś/- 181
paś /paś/ 181
paś before 146, 148
paś /paś/ away (from), 93, 146, 148
paśdū- /paśdūh-/ 107
paś /paś/ 28, 146, 148
paśīta- 25, 94
paś- 116
paś /paś/ 77, 88, 110
paś /paś/ 74
paśīt /paśīt/ 86
paśutatīt- /paśutatīt-/ 32, 51
paś /paś/- 210; pres. para- /para/- 162
paś /paś/ or /paś/ 3
paś /paś/ 161
nīpāhē /nīpāhē/ 19, 20
paś /paś/ 86, 198
paśa- see fras-
parātu- 59, 67f, 126
parātu /parātu/ 22, 41, 127
parātu /parātu/ 20, 22, 41, 127
parātu- /parātu/- 74, 87, 94
parātu- /parātu/- 57, 67f, 108
piś- 210; pres. piśa- 171
parūt-, /parūt- 71
parāos /parāos/ 32, 93
parūtī /parūtī/ 32, 51
par- 86
parī /parī/ 73, 86
pīrī /pīrī/ 86
pārī /pārī/ 16, 26, 73, 86
pūtra- 94, 96

R
raṇxānaha /raṇxānaha- 25, 37, 39
rañdra- /rañdra/- 73
rañdrahyā /rañdrahyā/ 2
raṇxānaha /raṇxānaha- 25
rah- 211; des. rāṛṛīya- /raṛṛīya-/- 4, 83, 89, 152, 190
rāṛṛīya- /raṛṛīya-/- 3, 24
caus. rāṛṛīya- /rāṛṛīya-/- 101, 172
rāīdī- /rāīdī/- 88, 90, 93
rājī /rājī/ 43
rācaḥ- /raucaḥ-/- 94, 98
rācaḥī /raucaḥī/- 21
rāpa- 211; pres. rāpa- 170
rāś- 211 caus. rāśa- 172
rāśayeṛī /rāśayeṛī/- 19, 31, 100, 199
rāśa- 77
rāśīśa- 136
rāś- 211; aor. rāś-, 183f
rāśyaḥ /rāśyaḥ/- 21
rād- 211; aor. rād- 176
rāma- 46
rāman-

rāmā /rāmāl/ 95
rāmā /rāmām/ 101
rāna-

rānā /rānāyāhi/- 23
rānā /rānāyāhi/- 46, 53, 105
rāṛśa- /raṛśa/- 4, 33, 83, 89
rāṛśa- /raṛśa/- 211; pres. ṛṛā- 162
rāḥar-, rāzan-
rāḥar /rāḥar/ 25, 94
rāḥā /rāḥām/ 76
rāma- 2, 46
rāḥ- 211; pres. rāḥha /rāḥha/- 172
rāḥha /rāḥha/ 2, 39, 102, 199
rāḥha /rāḥha/- 3
rāḥ- lament 211; aor. ṛaṛaḥ /raṛaḥ/- 184
pres. urudaya /urudaya/- 34, 41, 51, 171
rāḥ- 211; pres. uruṛaḥ-, hold back, /uruṛau/- 166; or pf. 187
uruṛaḥ /uruṛau/- 1, 42, 51, 102, 151f
rup- 211; caus. urūpaya- /rupaya/- 42, 51, 171

S

sac- 211; pres. saśa- /sasya/- 2, 171
sakkan /saśkan/
sand- 211; aor. sas- /sāns-, sans/- 102, 183f
saph- 211 pres. sāŋha- /sānha/- 170
aor. saḥ- 177
sahyā /sahyā/ 55
sastī /sastī/ inf. 198
sadayā /sadayā/ inf. 197
sanāyanī- 188, 193
sar- 211; pres. sāra- /sāra/- 46, 170
aor. sāra- /sāra/- 183f
sarā- /sara/- 28
sara~ /sarā/- 28
saraidya- /sāraidyā/- 99
sarajan- /sārajan/- 105, 114
sarāj-/ /sāraj/- 114
saraosdne /srausanail/ 25
sraus, /srausan/- 172
sūdya- /sūdya/- 42, 197
srauṣṭe- /srauṣṭe/ inf. caus. 199
sūụl /sūụl/ 42
stāmya- /stāmya/- 99
star-
strāmē /strāmē/- 29, 73
stā- 212; pres. stā- 166, 170
axṭāl /a xṭāl/ 44, 88, 97, 152
aor. stāgh /stāgh/- 183f
stāghā /stāghā/ 20
stu- 212; pres. /stū-, stau/- 164f
stāmni v.l. stāmni /stāmni/ 80
stava /stava/- 120
stūi- /stūi/- 42, 113
stū- 212; pres. stava-/stava/- 172
stāvī /stāvī/- 198
stāyaya- /stāyaya/- 172
stāca- /stāca/- 42
stāzd- 212; pres. stāda- /stāda/- 171
stādya /stādya/- 3, 43
aor. stāzd-/ /stāzd/- 177

S

ṣi- 212; pres. ṣay-, ṣ(y)- 164
ṣai ṣai/- 3, 77
ṣeitibyō /ṣeitibyō/- 31, 42, 191
ṣādra- /ṣādra/- 17
ṣādha-/ṣādha/- 1, 17, 76
ṣādhanā /ṣādhanā/ 3
ṣādahā /ṣādahā/- 1, 76
ṣādhanāi /ṣādhanāi/- 3
ṣādhanāi /ṣādhanāi/- 2
ṣādhanā /ṣādhanā/- 3
ṣādhanāś /ṣādhanāś/- 3
ṣādhanāṣṭu /ṣādhanāṣṭu/- 2
ṣāṭā- /ṣāṭā/- 76
ṣāṭā see ci-
ṣeitibyō see ṣi-
ṣ(y)- 212; pres. ṣ(y)ava /ṣ(y)ava/- 170
ṣavaite /ṣavaite/- 53, 199
ṣavāi /ṣavāi/- 3, 16
INDEXES

T

ta- 139
	tanū- /tanu/- 71, 90
tanūš /tanūš/ 3, 41, 128
tar- 212; pres. taurva(ya)- /taurva(ya)/ 51, 93, 173
tarāmāt /tarahmat- / 30, 105
tarō /taraḥ/ 28, 93, 146, 148
taš- 212; pres. tāš- 162, 165
tāš /tāš/ 16, 102
	ar /taš/ 181
	pt. tataš- 186
tašan- 77, 101
taya- /tāya/- 44f
tafltarah- 28, 93, 146, 148
tasān- 77, 101
tasān /tasān/ 44f

ta/m /tama/ 89
	θβαμ /θαμα/ 91

Θ

θβα- 16, 78

θβα- 16, 73
θβο/θαο/ 27
θβαζθα- /θαβαζθα/ 56
θβο /θαο/ 90
θβαζθα- /θαβαζθα/ 56
θβαρ- 213; aor. θβαρα- /θβαρα/- 183f
θβαροθ /θβαροθ/ 34, 94
θβαι /θαι/ 146f
θβασθ /θβασθ/ 16
θβα /θβα/ 84, 107
θβαν- θβανα- /θβανα/- 45
θβυ- 213; pres. θβυα- /θβυα/- 170
θβοϊ, ahi /θβοϊ/ 31, 38, 51
θβοϊ, ahi see θβυ-
θβονθθθ- /θβονθθθ/- 2, 24, 34, 94
θβα/θβα- 213; pres. θβαγ- 171
aor. θβαθ- 183f
θβαγγαθ /θβαγγαθ/ 31, 51, 197
θβα /θβα- 213; aor. θβασθ- /θβασθ/- 183f

U

uba-

ubē /ubail/ 90

ūcan see vac-
uyā etc. see vaf- ugra- 72
uīl /uīl/ 42, 146, 148
uπα /uπα/ 146, 148
uραδυγατ /uραδυγατ/ see rud-
uρωπαγα- see ryp-
uραύ /uραύ/- 214; aor. uραύ etc. /uραύ/- 183
uρανυ /uρανυ/- 42, 120
uρανο /uρανο/ 23, 101
uρανε /uρανε/ 199
uρανας uρανας cal 41
uρω /uρω/ -1
uρωθα /uρωθα/- 46
uρωθα /uρωθα/ 46
uραδυδα- /uραδυδα/- 136
uραθα- 1
uραθα /uραθα/ 46
uραθα /uραθα/ 46
uραθα /uραθα/- 46f
uραθα /uραθα/- 106
uραθα /uραθα/- 215; perf. vaψαζ- /vaψαζ/- 41, 97, 151, 186
uραθα /uραθα/- 2
uραθα /uραθα/- 136
uψ 81, 146, 148
usig- 113
usix /usix/- 102
uστανα- 93, 195
uστανασατα- 104, 108
uψα-/ 80
uψα- see υψα-
υψα-/ 80
υψα- 26
υψα- /υψα/- 30
υψα- /υψα/- 30
uψα- 16
υψα- 81
υψα /υψα/- 121
υψα /υψα/- 35, 47, 200
υψα /υψα/- 127, 199

V

vac- 213; aor. vaακα- /vaακα/- 33, 181
pf. vaακκ /vaακκ/- 186
fut. vaψα- 187
pass. aor. vaκι /vaκι/ 188
υακ Community /vaακα/ 42, 155, 199
υακακα /vaακακα/ 199
υακακ /vaακακ/ 85
INDEXES

Y

ya- 140
  yō /yah/ 27
  yōno /yam/ 28
  yōngiš /yas û/ 18, 29
  yōčiam /yačíaaml/ 4
  yam /yam/ 4

yadā 146
  yam- 215; pres. yasa- 172
    aor. yam- 177
  yaoš /yauš/ 114

yaq see yau-
  yaqāda- /yauqāda-/* 106, 114

yasna- 76, 89
  yesné /yasnai/ 31
  yasā.śya- /yasāhyya/* 26, 190
    yasā.śyān /yasāhyān/ 26, 55
  yat- 215; perf. yōšt /yait/* 151, 186

yātā 2, 146
  yātana /yathān/ 146
  yātā /yathā/ 146, 148

yaś- 110
  ayō /ayū/ 84, 101
  yaš /yauš/ 84
  yašat /yaušat/ 44f, 146f
  yašat, ā /yašaṭat/ 44f, 146f
  yas- 215; pres. yasa- 170
  yasaitē /yasaitē/* 89
  yasaśi /yasaśi/ 158

yazu-
  jeziu /jeziu/* 51

yā- 215; pres. yās-, 172
  pres. /iʔ-/* 166
  āyō /iai/* 1, 2
  idām /iḍam/* 3

yāda /yāda/* 1, 146
  yāh- /yaḥ/* 90
  yā.śyaubana- /yaśyaubana/* 108
  yessa- /yessa/* 99
  yezi /yezi/* 146

yōbitämā see yao-
  yuj- 216; aor. yauj-, yuj-, lyuj-, yuj-/* 177
    yōgot /yogot/* 101
  yuṣmava- 42, 96f
  yuṣmāka- 42, 96f
  yuṣmāka- 42, 96f
  yuṣmāvanti- 96f
  yuṣem /yuṣem/* 26
    yuṣmābiya /yuṣmābiya/* 96f
  ximbiya /ximbiya/* 53, 96f
  nū /nu/* 27

Z

zaqya- /zahiya-/* 56, 90, 195
  zam- 114
  zam /zām/* 77
  zal- see xfnā-
  zaña- /zauña-/* 72
  zaoat- 71
  zar- 216; pres. zarana- /zarna/* 168, 170
  zaranaēmā /zarnaēma/* 2
  zaranaštā- 104, 106
    zaranaštānē /zaranasthāya/* 31, 53
  zasta- 72, 80
  zastāśta- /zastāśta-/* 106
  zaqya- /zaviq-/* 90, 195
  zar- 216; pres. zaz- 166
    pres. /zaγ-/* 171
        zayahl /zayahul/ 87, 177, 216
    aor. /zaʔ-/* 165
        azāha /zaʔahal?/* 4, 155
  zaqha- /zaqna-/* 86
    zaqāi /zaqāi/* 4
  zrazd- /zrzd-/* 113
  zrānum see zaqya-
  zruštāya- /zruštāya-/* 43f, 99
  zi/i /zi/* 146, 149
  zi- 216; aor. zay- 177
        zayahl /zayahul/* 87, 177, 216
  zūϊiš- /zišnu-/* 39
  zraz. dā- /zrazdā-/* 91, 105, 114f
  zrazdāti- /zrazdāti-/* 105
  zrazdiša- 105
  zū- 216; pres. zbaγa- /zbaγa-/* 171
    zbaγa /zbaγul/* 89, 99
    int. zaγaγ- /zaγuzaγ-/* 190
    zaγaγam /zaγuzaγam/* 152
  zūt- 72
  zyam- 114
  zem /zem/* 28, 30

4. Yasna Haptanghaiti

aidyūnm 42
anṣaγmaid 151
anṣa- 57
anyadā 144
ast- 113f
asaghāc- /artahāc-/* 113
avač 151
avacāma 151
attāγi 34
āhūrya- 42
āp- 180
ātār 25, 94
bavainī 191
INDEXES

barzista- 136
bāl 144
ciśmahi 168
dargā. bāzu- 126
dā- 185
śādū 29
fraṣi- 57
fryamahi 23, 168
hūvainiš 28f
hiśamādē 44, 166, 168
huamahi- 23, 168
isūṭāya- 42, 190
jījīṣa- 189
kudazāla- 195
maḍkaya- 190f
manayēi-ca 55
mainimādī-ca 42, 175
naenāstārō 37
nās- 75, 113
NSNAYA- 55, 190
raocīkvanat- 35
sračīla- 37, 136
suc- 114
surunvant- 30
uba-, ūdyo- 34
urunō 41
uta 146
vacēti 30
vaṭēṣa- 44, 172
vahehtī 31, 53
vahekyā 56
vaocīmā 38
varṣi- 177
varziśmā-ca 42, 160f
vāṭāya- 172
vāṭyamahi- 28f, 34
vāṭyēti 34f
vāvratvana- 191, 194
vāvōzvītā 35
vōi /vai/ 146
vōyādē- 114f
xrāp- 177
yavaējē 37, 114
yavaēvē 37, 114
yazamādē 44
saṃma 161
zā- 179

borzant- 136
borzyaogat 101
brvat-baṃ 113
cinmāni 122
dauś.srauha- 40
dauś.mahāya- 40
dŏdā 30
dunman- 23
fomrti- 24
yēsaraīi- 77
hazaya- 52
Handu- 30
paytaghum 52
saēna- 77
srīra- 136
sūra- 136
uruād- 136
xurēdéra- 136
yōišla- 29

6. Sanskrit
Only the verbal roots mentioned pp. 203-216 are given.

ah- 203
.arh- 204
as- be 203
as- throw 203
av- 204
*āh- 204
āp- 204
āz- 204
brū- 210
budh- 205
bhaj- 204
bhī- 204
bhīr- 204
bhū- 205
bhūs- 205
ci- 205
cit- 205
cyu- 212
chand- 211
chā- 211
dabh- 205
da- 206 give
da- 206 distribute
da- 206 bind
dbhū- 206
dīś- 206
druh- 206
ādh- 205
dūś- 205
dhr- 205
gam- 207

5. Late Avestan
The words with -āē- and -ōi- pp. 36ff are not given.

arsēa- 77
ārmaitiś hāgēt 101
āšt. hāgēt 101
baēvāni 122
<table>
<thead>
<tr>
<th>Index</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>gā-</td>
<td>207</td>
</tr>
<tr>
<td>grabh-</td>
<td>207</td>
</tr>
<tr>
<td>grh-</td>
<td>207</td>
</tr>
<tr>
<td>ghus-</td>
<td>207</td>
</tr>
<tr>
<td>han-</td>
<td>208</td>
</tr>
<tr>
<td>hā-</td>
<td>216</td>
</tr>
<tr>
<td>hi-</td>
<td>216</td>
</tr>
<tr>
<td>ḥē-</td>
<td>216</td>
</tr>
<tr>
<td>hū (huā-)</td>
<td>216</td>
</tr>
<tr>
<td>i-</td>
<td>208</td>
</tr>
<tr>
<td>id-</td>
<td>208</td>
</tr>
<tr>
<td>iī-</td>
<td>208</td>
</tr>
<tr>
<td>is-</td>
<td>208</td>
</tr>
<tr>
<td>iś-</td>
<td>208</td>
</tr>
<tr>
<td>ji-</td>
<td>208</td>
</tr>
<tr>
<td>jī-</td>
<td>208</td>
</tr>
<tr>
<td>jnā-</td>
<td>215</td>
</tr>
<tr>
<td>kanī-</td>
<td>209</td>
</tr>
<tr>
<td>klp-</td>
<td>215</td>
</tr>
<tr>
<td>kruś-</td>
<td>215</td>
</tr>
<tr>
<td>kṣ-</td>
<td>209</td>
</tr>
<tr>
<td>kṣā-</td>
<td>215</td>
</tr>
<tr>
<td>kṛś-</td>
<td>212</td>
</tr>
<tr>
<td>manh-</td>
<td>209</td>
</tr>
<tr>
<td>man-</td>
<td>209</td>
</tr>
<tr>
<td>mā-</td>
<td>209</td>
</tr>
<tr>
<td>mith-</td>
<td>209</td>
</tr>
<tr>
<td>mṛc-</td>
<td>209</td>
</tr>
<tr>
<td>mṛd-</td>
<td>209</td>
</tr>
<tr>
<td>mydh-</td>
<td>209</td>
</tr>
<tr>
<td>mṛuc-</td>
<td>210</td>
</tr>
<tr>
<td>naś-</td>
<td>210</td>
</tr>
<tr>
<td>naśc-</td>
<td>210</td>
</tr>
<tr>
<td>nī-</td>
<td>210</td>
</tr>
<tr>
<td>pas-</td>
<td>212</td>
</tr>
<tr>
<td>pā-</td>
<td>210</td>
</tr>
<tr>
<td>pri-</td>
<td>207</td>
</tr>
<tr>
<td>pṛ-</td>
<td>210</td>
</tr>
<tr>
<td>pṛś-</td>
<td>210</td>
</tr>
<tr>
<td>rā-</td>
<td>211</td>
</tr>
<tr>
<td>rādh-</td>
<td>211</td>
</tr>
<tr>
<td>rud-</td>
<td>211</td>
</tr>
<tr>
<td>rudh-</td>
<td>211</td>
</tr>
<tr>
<td>rup-</td>
<td>211</td>
</tr>
<tr>
<td>ṛ-</td>
<td>204</td>
</tr>
<tr>
<td>ṛdh-</td>
<td>204</td>
</tr>
<tr>
<td>sac-</td>
<td>207</td>
</tr>
<tr>
<td>sad-</td>
<td>207</td>
</tr>
<tr>
<td>san-</td>
<td>208</td>
</tr>
<tr>
<td>sap-</td>
<td>208</td>
</tr>
<tr>
<td>sas-</td>
<td>207</td>
</tr>
<tr>
<td>sī-</td>
<td>208</td>
</tr>
<tr>
<td>smṛ-</td>
<td>209</td>
</tr>
<tr>
<td>spaś-</td>
<td>212</td>
</tr>
<tr>
<td>stu-</td>
<td>212</td>
</tr>
<tr>
<td>sthā-</td>
<td>212</td>
</tr>
<tr>
<td>sū-</td>
<td>208</td>
</tr>
<tr>
<td>sāk-</td>
<td>211</td>
</tr>
<tr>
<td>sāṁs-</td>
<td>211</td>
</tr>
<tr>
<td>sāś-</td>
<td>212</td>
</tr>
<tr>
<td>śru-</td>
<td>212</td>
</tr>
<tr>
<td>suc-</td>
<td>212</td>
</tr>
<tr>
<td>sū-</td>
<td>212</td>
</tr>
<tr>
<td>taks-</td>
<td>212</td>
</tr>
<tr>
<td>trā-</td>
<td>213</td>
</tr>
<tr>
<td>tṛ-</td>
<td>212</td>
</tr>
<tr>
<td>tū-</td>
<td>213</td>
</tr>
<tr>
<td>uḥ-</td>
<td>204</td>
</tr>
<tr>
<td>vac-</td>
<td>213</td>
</tr>
<tr>
<td>vaks-</td>
<td>214</td>
</tr>
<tr>
<td>vana-</td>
<td>213</td>
</tr>
<tr>
<td>vas-</td>
<td>213</td>
</tr>
<tr>
<td>vat-</td>
<td>214</td>
</tr>
<tr>
<td>vena-</td>
<td>213</td>
</tr>
<tr>
<td>vid-</td>
<td>214</td>
</tr>
<tr>
<td>vidh-</td>
<td>214</td>
</tr>
<tr>
<td>vis-</td>
<td>214</td>
</tr>
<tr>
<td>vīdh-</td>
<td>214</td>
</tr>
<tr>
<td>vṛj-</td>
<td>214</td>
</tr>
<tr>
<td>vṛdh-</td>
<td>214</td>
</tr>
<tr>
<td>vṛ-</td>
<td>213</td>
</tr>
<tr>
<td>yaj-</td>
<td>215</td>
</tr>
<tr>
<td>yam-</td>
<td>215</td>
</tr>
<tr>
<td>yat-</td>
<td>215</td>
</tr>
<tr>
<td>yā-</td>
<td>215</td>
</tr>
<tr>
<td>yuj-</td>
<td>216</td>
</tr>
</tbody>
</table>