

INTERVOCALIC LARYNGEAL IN GATHA-AVESTAN*

R. S. P. BEEKES
Rijksuniversiteit te Leiden

0. Even though the instances of hiatus caused by laryngeals in Gathic have been collected by Monna (1978:97f), there is reason to return to the subject. Apart perhaps from Hittite, there is no language where traces of the Proto-Indo-European laryngeals are so clear as in Gathic, and here we have the problem that the expected hiatus is not found.

We must distinguish between laryngeal after *i*, *u* and after *a*. Laryngeal in anlaut may be discussed first (the reader should consult the chart at the end of this paper).

1. Laryngeal in Anlaut:

1.1. *Augment*: Gathic has only very few augmented forms. In fact, only if (in 31.9a) *as* (twice) must be read /a'as/ (so that 6 - 8 becomes 7 - 9; cf. 3.7.1) would we have a relevant form.

1.2. *Reduplication*: I have previously tried to demonstrate (cf. Beekes 1979a) that *uzirēidyāi* had four syllables (i.e., *uzi'ṛdyāi*) and that *rārešya-*, *rāreša-* (also *ṣ*, never *š*) had three (i.e., *rā'ṛšya-*, *rā'ṛša-*). The first word, cognate with Gk. *δρουυυ*, had *h₃*, and the

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second, if cognate with Gk. ἀρνώμαλ, h_2 .

1.3. *Compounds*: The compounds have hiatus when two vowels meet. We must determine whether or not the second element had an initial laryngeal. A list is given by Monna (1978:97f):

1. *ašā.aojanhō, ašaowšayantā*: * h_2 eug-.
 2. *eiθrā.avanhēm*: both Gk. ἐνήης and Lat. *avēre* would point to h_2 , but both connections are doubtful.
 3. *dējāmāspa-, vištāspa-*: * e^h wos, which may or may not have had h_1 .
 4. *dərəštā.aēnanhēm, pouru.aēnā*: no certain evidence (cf. Mayrhofer III 656 s.v. *ēnaḥ*).
 5. *fərašaoštra-*: *uštra-*, uncertain.
 6. *fraēštānḥō, zastāišta-*: if cognate with Skt. *īṣate* "hastens", *ī-* might derive from **Hi-Hs-*.
 7. *fracwtā, hizvā.uθāiš, xšmā.uθāiš*: *uc-*, *vac-*, which has no laryngeal (Gk. ἔπος).
 8. *hvanhəvīm, parāhūm*: *ahu-* "life", uncertain (perhaps from *as-* "to be"; probably * h_1 es-).
 9. *hwāpā /hu'āpah-/*: Lat. *opus*; h_3 .
 10. *paityāstīm*: uncertain.
 11. *θβā.īštīš*: uncertain.
 12. *x^vaēta-*: uncertain. (*/hu'ā'ita-/* would have given **x^vāita-*)
 13. *x^varaiθya-*: *ārtha-*; if cognate with *ṛcchāti*, h_1 .
 14. *x^vāθra-*: uncertain.
 15. *x^vāθrōyā*: uncertain.
 16. *x^vīti-*: *i-* "to go", uncertain.
- (*hvarštāiš /hu-varštāiš/* is not relevant; *paitī.əretē* is not a nominal compound.)

There are only three relatively certain instances: two positive (* h_3 ep- and * h_2 eug-) and one negative (*uc-*). This is to be expected since it is very difficult to demonstrate initial laryngeal.

Many scholars think that every Proto-Indo-European root started with a consonant. However, I think that in a few cases it can be

shown that there was no laryngeal (cf. Beekes 1974). Here we found one form without laryngeal, but it is probable that the large majority had one. We can assume that the hiatus in compounds spread analogically to the few cases where there was no laryngeal.

However, a number of these forms might have hiatus according to the rule, known from Vedic, that hiatus was maintained when the second vowel was followed by two consonants (AiGr. I 315). This would apply to 1b, 3ab, 5, 6ab, 7abc, 10, 11, 13, 15. This would explain the three forms that have no laryngeal (7). However, this principle is not sufficient to explain the whole phenomenon.

A problem is presented by *darəgāyu-* 28.6a. It contains **h₂oyu-*, but it has no hiatus. Kuiper (1978:25) hesitatingly accepts loss of the laryngeal in compounds. However, this would leave the phenomenon as a whole without explanation. Also, we saw that laryngeal in anlaut was retained even where it would have disappeared phonetically (as we shall see). If this word is a Proto-Indo-European formation, it could have been **d_lhgho-h₂yu-*. Also hiatus, giving a 7 - 10 verse, cannot be entirely excluded as there are a number of verses where 7 - 10 cannot easily be reduced (29.1c.4c, 30.4c.8c, 32.6a, 33.4b, 34.8a.11c).

2. The Sequences *iH-V* and *uH-V*:

2.1. It seems that in the sequences *iH*, *uH* plus vowel, *i* and *u* remained syllabic everywhere, with the following exceptions:

In 44.10d, *daiđyat*, 3rd sg. pres. of *dā-* "to see", must be disyllabic. The explanation may be loss of laryngeal as found in compounds (cf. Kuiper 1961).

For *hižvā-* 47.2b, 51.3b, cf. Kuiper 1978:12-6.

Another exception is *x^vənvat* 53.4c. The metre of Y 53 gives many difficulties, but the middle part of 7/8-7/6 - 5 is never 8. This may be due to the fact that Y53 is younger than the others, but, then, we must accept that many instances of hiatus have been preserved here as archaisms. In 33.2b, the form could also be disyllabic. Therefore,

Kuiper (1978:25) suggests loss of laryngeal in a derivative.

aojyaēšū 46.12b. *aojya-* is generally considered a gerundive, so we expect *-iya-*. This would give 4 - 8, of which Monna (1978:113-5) allows only five instances (one as certain, four as possible). *-iya-* would also be expected according to Sievers' Law.

For the accusative singular of the \bar{z} -stems, cf. 2.4.

2.2. *The Genitive Dual*: Of the categories presenting syllabic *i* and *u*, only the genitive dual will be discussed here. *Ahvā*, and *main-yvā* 30.5a (the manuscript readings *iiuu* [S₁; and H₁, which represents an independent tradition], *iuu*, *uu* [with *i*-epenthesis], *ii* suggest that *iiuu* was the original reading; *manauā* Mf₁, Pd may have *a* for *ii* ["for"]) must be trisyllabic. This means that the ending was probably **-Hās*, giving **ahuhās*, **manyuhās*. Then *hant(a)yā* 53.7b must have been **hawti-Hās*. In the *a*-stems, *-ayā* must then be **-aiHās*.

Hoffmann (1975/6:561, fn. 2) pointed out that Vedic *-os* must continue **-Hous*, as shown by trisyllabic *pitróš*, *mātróš*, *svásros*, *hárjos*, *hānvos*. He connected it with *ahvā* (which of course has another ending) and suggested that the laryngeal was h_1 (taken from the nominative dual). This would mean that the Proto-Indo-European endings were nom. **-h₁(e)*, gen. **-h₁ē/ōs* or **-h₁e/oHs*, loc. **-h₁ou* (*-s* is evidently a later addition). However, we cannot be certain that the laryngeal was h_1 .

2.3. Important is *vairyā* 43.13e, gen. sg. of *vairya-*. From this stem, we further have *vairīm* 34.14a, 51.1a, both times trisyllabic, */vairiyam/*. *vairyā* is supposed to stand for **vairiyayā* with haplogy (which is known from both Avestan and Vedic). It is impossible that our text had *-yayā*, because, as the stem appears to have been */vairiya-/*, this would have given four syllables, which is impossible: the verse requires a trisyllable. The text, then, must have had */vairiyā/*.

For *-iya-* in this form, there are in principle two explanations: (1) If it was a Sievers form of *varyā* (with haplogy from */vairiyayā/*),

this would mean that it was **varH-ya-* that gave the Sievers form. (2a) If *-iya-* goes back to *-iHo-*, */variHayāh/* could only have been shortened to */variyaāh/* after */variHayāh/* had developed into */variyaāh/*. (2b) If *-iya-* goes back to *-iHo-*, there is a second possibility, namely, that the feminine of */variHa-/* was */variH-/* (AiGr. II.2 401, 412). This would have given */varyaāh/* in the genitive. But the form was tri-syllabic, i.e., */variyaāh/*, which can only be explained as a Sievers form after consonant plus laryngeal. If the forms with *išya-* are one word (Insler thinks that there are three separate words), and if it had *-iHo-*, *išyqm* does not have an *ī-* form for the feminine. I find no forms in Gathic with *-y-* after *-CH-* and thus cannot determine whether or not Sievers' Law operated there. The Sanskrit evidence is negative (cf. Beekes 1976:90). Therefore, (1) and (2b) are improbable. (1) is improbable anyway as the form is a gerundive, where Gathic and Vedic have *-iya-*; a Sievers form is impossible here, since *-iya-* must be from *-iHo-*. Cf. Monna (1978:98): *zahya-* 53.8b, *zəvīm* 31.4a; *išya-* is very uncertain; on *aojya-*, cf. 2.1. Insler adds *vaēdyā* 44.8d. Therefore, (2a) must be the right explanation.

This is rather important, as it would prove that the laryngeal after *i* and *u* was already lost early enough for the haplology to occur in this form. It seems obvious to assume that the laryngeal after *a* had disappeared as well at that time.

2.4. *ī/yā-stems*: The forms found in Gathic are:

Sg. Nom.	<i>-ih₂</i>	<i>-ī</i>	<i>vaṇuhī</i>	<i>yezivī</i>		
Acc.	<i>-ih_{2m}</i>	<i>-īm</i>	<i>vaṇuhīm</i>	<i>təvīšīm</i>	<i>azīm</i>	<i>hāitīm</i>
Gen.	<i>-ieh₂-(e)s</i>	<i>-yā</i>	<i>vaṇhuyā</i>	<i>būmyā</i>	<i>azyā</i>	
Dat.	<i>-ieh₂-ei</i>	<i>-yāi</i>	<i>vaṇhuyāi</i>			
Inst.	<i>-ieh₂-eh₁</i>	<i>-yā</i>	<i>vaṇhuyā</i>			
Loc.	<i>-ieh₂-i</i>					

Pl. Nom.	<i>-ih₂es</i>	<i>-īš</i>	<i>manaοθrīš</i>	<i>αηυήīš-</i>	<i>nəmax^vaitīš</i>
Acc.	<i>-ih₂ns</i>	<i>-īš</i>	<i>aršnavaitīš</i>		
Gen.	<i>-ih₂om</i>				
Dat.	<i>-ih₂-bhyos</i>	<i>-ibyō</i>	<i>šyeitibyō</i>		
Du. Nom.	<i>-ih₂-(i)H</i>	<i>-ī</i>	<i>təvīšī</i>	<i>azī</i>	
Acc.		<i>-ī</i>	<i>təvīšī</i>		

We have seen that the *i* remained vocalic in Gathic when from an original sequence *iHV*. This means that the accusative singular and plural, as well as the nominative plural, must be analogical, having been remodeled after the *ā*-stems.

The Proto-Indo-European form for the nominative dual is not certain. From *-ih₂-iH*, one might expect *-iyī*.

The genitive singular may have had *-s* or *-es*, but in the dative only *-ei* seems possible (*-i* would have given *-yē*). If it is old, the laryngeal has left no hiatus. The instrumental might have had *-ieh₂h₁*.

3. The Sequence *aH-V*:

3.1. Apart from the other *ā*-stem forms, we may point to the pronouns *θβōi* 31.9a, 44.11c, 48.8c, and *x^vaē-* 46.11c, nom. sg. fem., both monosyllabic. They must represent **tweh₂-i*, **sweh₂-i*. It is clear that the laryngeal disappeared in this sequence.

3.2. *ā*-stem nouns: A table of the Gathic forms is given on the next page. None of the relevant forms has hiatus:

Sg. Voc.	<i>-eh₂i</i>	>	<i>-a'i</i>
Acc.	<i>-eh₂m</i>	>	<i>-a'am</i>
Inst.	<i>-eh₂eh₁</i>	>	<i>-a'ā ?</i>
Loc.	<i>-eh₂i</i>	>	<i>-a'i</i> (but <i>vyānayā</i> is uncertain)

Pl. Nom. *-eh₂es* > *-a'as*

Acc. *-eh₂ns* > *-a'as*

Du. Nom. *-eh₂i* > *-a'i*

There is some doubt about the instrumental singular. It could have been *-eh₂-h₁* or perhaps *-h₂-eh₁*. Both would give monosyllabic forms.

	Singular	Plural
Nom.	<i>-ā daēnā</i>	<i>-ā(s-) daēnā</i>
Voc.	<i>-ē, -ā bərəxθē, spəntā</i>	
Acc.	<i>-əm daēnəm</i>	<i>-ā(s-) daēnā, sāsnā(s-)</i>
Gen.	<i>-ayā daēnayā</i>	<i>-anəm sāsnanəm</i>
Dat.	<i>-ayāi daēnayāi</i>	<i>-ābyō vazyamnābyō</i>
Inst.	<i>-ā daēnā</i>	<i>-ābīš daēnābīš</i>
	<i>-ayā daēnayā, sāsnayā</i>	
Loc.	<i>-ayā vyānayā ?</i>	<i>-āhū gaēθāhū</i>

Dual

Nom. *-ē ubē*

For the forms in *-ē* (*bərəxθē, ubē* [and *vyānayā*, if this is a locative in *-ai + ā̃*]), phonetic loss of *h₂* must evidently be admitted: analogy for two (or three) different forms is much less probable. This conclusion confirms that of section 3.1.

The same explanation must be accepted for the nominative plural: the laryngeal disappeared in *-eh₂e-* (or *-aHa-*). We arrived at the same conclusion for the dative of the *ī*-stems (see 2.4).

The accusatives are much more difficult. The accusative singular must have become *-əm* phonetically, because the *ī*-stems shaped their accusative after it. On the other hand, *hyēm, dyəm* = */hya'am, dya'am/*

point to a vocalization $-e\ddot{a}m$ with the Indo-Iranian development of the vocalic nasal. This is also found in $v\ddot{a}ta-$ / $va'ata-$ / (< $*h_2weh_1n\ddot{t}o-$) and in the accusative of the type / $mazda'am$ /. We shall return to this problem in section 4. I do not think that 3 pl. inj. $\dot{d}a\dot{n}$ / $\dot{d}\ddot{a}n$ / 45.10e, 49.4d provides evidence; we would expect $*\dot{d}aH-\ddot{n}t > /da'at/$. The form is easily explained as analogical ($\dot{d}\ddot{a}+n$).

The development $-eh_2m > -\ddot{a}m$ might be very early. It should be noted that Lith. $-a$ had no laryngeal ($rañk\dot{a}$).

For the accusative plural, Indo-Iranian and Germanic point to $-\ddot{a}s$, the other languages to $-\ddot{a}ns$. It is possible that Germanic simply has the form of the nominative plural and that Indo-Iranian has $-\ddot{a}s < -a'as < -aH\ddot{n}s$. The first, however, seems rather a result than a cause. For the latter, the relative chronology is relevant. As the syllabic nasals were retained as such down to the separate Indian and Iranian branches, the development $-aH\ddot{n}s > -a'as$ too could only have taken place in Proto-Indo-Aryan and Proto-Iranian. In that case, I would expect that the laryngeal/hiatus would have been preserved down to Gathic (and Vedic). The attempt to explain the evidence for $-\ddot{a}s$ as secondary, therefore, is not strong. A priori, it is more probable that the aberrant $-\ddot{a}s$, found in two widely separated groups, is the older form and $-\ddot{a}ns$ an adaptation. Above we saw that $-eh_2m$ could have resulted early in $-\ddot{a}m$. Then it is probable that $-eh_2ns$ in the same way and at the same time resulted in $-\ddot{a}ns$, which could have further developed into $-\ddot{a}s$. If this is correct, the development probably was still Proto-Indo-European (Rix 1976:75 gives the same interpretation).

3.3. $x\ddot{s}n\ddot{e}m$ 48.12b, 53.2b has a variant $x\ddot{s}n\ddot{u}m$, but $x\ddot{s}n\ddot{e}m$ is in both places clearly the better attested reading (note that H_1 has this reading; in Y 53, K_5 corrects $-\ddot{u}m$ to $-\ddot{e}m$. See Kellens [1974:196] for corrections to Geldner; I do not subscribe to his conclusion that "les leçons sont assez équivalentes"; also \ddot{u} for \ddot{e} is much more probable than the reverse). The best interpretation is a root noun $x\ddot{s}n\ddot{a}-$ with $x\ddot{s}n\ddot{e}m = *x\ddot{s}n\ddot{a}m < -e\ddot{h}m$. If it is the root "to know", the laryngeal

would have been either h_3 or h_1 .

3.4. Nom. sg. *mąθrā* is trisyllabic, 50.6a, 51.8c, and represents **mentro-Hōn* (-*Hēn*) as shown by Hoffmann (1955). The laryngeal is hard to identify. Hoffmann suggests that Gk. *μελαν-* is *mel-Hn-* "Schmutz habend". In that case, it must be h_2 . But *μελαν-* is not clear enough. Lat. *iuvenem* < *(h_2)*yuHeru* does not prove h_1 , as Hoffmann seems to suggest. Hoffmann suggests that the laryngeal was h_1 because there are no "konstante Vokalumfärbungen" (n3), with which he points, I think, to Gk. and Lat. *-ōn*. However, in *-oHōn*, *-o-Hon-*, *-oHn-* all laryngeals are possible, and, for *-o-Hēn*, *-o-Hen-*, h_3 is easier than h_1 , but we cannot be certain.

As we saw, in *-eh₂e-* the laryngeal left no hiatus. Here we could assume that we have h_1 or h_3 and that this remained. I think that this is improbable phonetically ([*ah₂a*, *eh₁e*]). Rather, it would have been analogical; it could have been taken from **mantraHn-*. This would be parallel to **dyaHm* after **dyaHs* (see 4).

3.5. *zaranaēmā* 28.9a. I suggested (apud Monna 1978:10, n17) an original athematic **zr̥-naH-iH-ma* /*zrna'īma*/. The form may well be thematic just as it stands, /*zarṇaīma*/, for several lines have 7 - 8 syllables in Y 28. Also, *-aHīHma* would have lost its hiatus in Gathic, unless it was restored analogically. I see no reason for Insler's emendation **zarṇāyaēmā*. Of course, *zara-* stands for *zarə-*, with *-ar-* introduced from *zarəta-* (or elsewhere).

3.6. *frīnāi* 49.12c presents several difficulties. The forms from *frī-* in Avestan are:

Act.	<i>frīnāmi</i>	Subj.	<i>frīnāni</i>	
	<i>frīnaiti</i>		<i>frīnāt</i>	
	<i>frīnənti</i>			imp. <i>frīnəntu</i>

Mid.	<i>frīnāi</i> (GAv.)	
	<i>fryǵmahī</i> (YH)	ptc. <i>frīnəmnā</i> (GAv.)

fryǵmahī is athematic, *frīnəmnā-* is thematic, all other forms can be both.

If *frīnāi* is thematic, we would expect *frīna'ai*, but there are more exceptions here (see 3.8).

However, I would expect hiatus from the athematic form too. In the first place, an athematic subjunctive would have $-o-h_2ei > -a-Hai > -a'ai$. This holds for all 1 sg. athematic subjunctive forms. But *frīnāi* has an extra complication: the subjunctive also has the full-grade of the stem in Avestan, as in Vedic, in the *nā*-presents. This would give 1 sg. $-naH-a-Hai > -na'a'ai$. (This is the only *nā*-verb in Gathic; Vedic has no 1 sg. middle.) If the laryngeal following *e/o* (IIr. *a*) had disappeared without hiatus, there would be no problem.

3.7. PIE *-ee-*, etc.: It has been held that in Gathic two of the PIE vowels *-e-* and *-o-* when directly following each other, were not yet contracted. However, I do not think that this is correct.

In the first place, it is a priori very improbable that a sequence *-oo-* or *-oe-* remained uncontracted for more than a thousand years. It is very important to remember that, as we have seen in 3.1 and 3.2, a sequence *-e/oHV-* has no hiatus.

There is little evidence for hiatus in certain instances. If the ablative in *-ōd* originated from *-o-ed*, GAc. */-āt/* shows that there is no hiatus. The nominative plural of the *o*-stems has *-ā*. If this represents (a sandhi form of) *-ōs < -o-es*, it shows that there was no hiatus. The dative singular in *-āi* is discussed in 3.7.1, the genitive plural in 3.7.2. The thematic subjunctive, which is considered as positive evidence, will be discussed later.

3.7.1. Dat. sg. in *-āi*: Kuiper (1964:98) considers the possibility of "a very antique pronunciation *-a'ai*" in 33.2c *vārāi* and 51.11a

spitamāi; in 28.5b, he reads *ahurahyā* for *ahurāi*. He points out that verses with 6 - 9/8 are rare. I think that the case is even stronger. The two problems should be considered together:

	6 - 9/8; 6 - 7	dat. in <i>-āi</i> in two short half-lines
30.1b	6 - 9	<i>ahurāi</i>
31.15b	6 - 9	<i>duššyaoθanāi</i>
33.2c	6 - 9	<i>vārāi</i>
34.4c	6 - 9	
28.5b	6 - 8	<i>ahurāi, səvištāi</i>
31.9a	6 - 8	
51.11a	6 - 7	<i>spitamāi</i>

Kuiper dismisses *duššyaoθanāi* since it could be /*duššiyauθna/* or /*duššyauθ.na/*. But the first has now been proved improbable (Monna 1978: 106), and the second as well. The instances assumed by Monna (index s.v. *šyaoθana-*) have 7 - 8 (30.3b has 8 - 8) except 48.5b, where 5 - 6 must be accepted, because several such verses are found here together.

This means that five out of seven first half-lines with 6 instead of 7 syllables have a dative in *-āi* (unless we read *-ahyā* in 28.5b and 30.1b). This makes it very probable that the dative ending was disyllabic. It would bring 28.5b to 7 - 8, or 7 - 9 if *səvištāi* too had a disyllabic ending. Here it is very welcome since there are only very few verses with *two* short half-lines. (Monna has further only 46.1c, with 3 - 6; difficulties in both half-lines are further found only in 30.3b and 32.6b with 8 - 8. 31.9a would be solved if *as* were *a'as*; see 1.1.)

However, I do not think that we must read *-a'ai*. In the first place, as stated above, I think it linguistically improbable that *-oei* (*-aai*) was not yet contracted (nor could it have become disyllabic by analogy). In the second place, Gathic does not have any other phenomenon of this kind represented in so sporadic a manner; they are in general very regular (see Monna 1978:97-110). I have counted 47 nouns in

-āi (and 4 dubious ones). Of these, 4 or 5 occur in the second part of 7 - 8 verses, where there is no reason to assume a disyllabic form. Only the five forms under discussion were probably disyllabic. Then there are 36 pronominal forms (*aḥmāi* 23, *kaḥmāi* 5, *yaḥmāi* 4, *māhmāi* 1, *θβaḥmāi* 1, *xšmākāi* 1, *yušmākāi* 1), none of which has a disyllabic ending. Lastly, the infinitive ending *-dyāi* has been shown to continue **-dhyōi* (Rix 1976), which must be a dative; it occurs 27 times. One stands in the latter half of a 7 - 8 verse (34.5b). For one only, a disyllabic form would be very welcome, 44.8b with 3 - 7.

I think that the five datives had *-āya* (and perhaps *sevištāi* as well). This form is well represented in Gathic (29.5a.11b, 34.11a, 45.9d, 46.10d, 53.1c.2b.4d have *-āi.ā*; Hoffmann [1975/6:650] reconstructed it in *ašā(i) yecā* in 30.1c, 51.2a. Insler assumed it for *frādaθāi a-(spərəzatā)* in 31.16b; it must perhaps be read in *mərəšdikāi a-(xštaṭ)* 51.4a). The difficulty that our texts have no trace of the *-a* disappears if we allow influence of the oral tradition. That the form, which had disappeared from the language, was replaced by the surviving form is an easy assumption.

3.7.2. Genitive plural: Recently, Kortlandt (1978) has shown definitively that the genitive plural ending was *-om*. Essential in his view, and for the explanation of Iir. *-a'am*, is that the *ā*-stems had *-H-om*. This is shown by those languages that have reflexes of *-om* in the *ā*-stems, for, if they had originally had *-eh₂-om*, the *-ā-* (*-aH-*) would never have been lost. He further assumes that the *o*-stems had *-om*, not *-oom*; that is:

	<i>o</i> -stems	<i>ā</i> -stems	cons. stems
1.	<i>-om</i>	<i>-h₂-om</i>	<i>-om</i>

resulted in Indo-Iranian:

2.	<i>-am</i>	<i>-am</i>	<i>-am</i>
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Then \bar{a} (= aH) was introduced to characterize the \bar{a} -stems (as happened in Greek and Latin $-\bar{a}s\bar{o}m$):

3. $-am$ $-aHam$ $-am$

It was now possible to characterize the \check{a} -stems also by restoring their stem vowel:

4. $-a-Ham$ $-aHam$ $-am$

after which $-aHam$ spread to all classes:

5. $-aHam$ $-aHam$ $-aHam$

6. $-\bar{a}naHam$ $-\bar{a}naHam$ $-aHam$

This is the phase found in Gathic. (It is remarkable that again the \bar{a} -stems imposed their form, $-\bar{a}-naHam$, on the \check{a} -stems, which could have been distinguished from them with $-\check{a}naHam$).

Not only is the analogical introduction of $-(a)H-$ relevant here, but also that there was no $-oom$.

3.8. Subjunctive: The forms are collected by Monna (1978:101f). A few remarks may be added.

On $as\bar{a}\theta\bar{a}$ see Beekes (1979b) ($a-$ may be a glide vowel between $y\bar{a}i\check{s}$ $s\bar{a}\theta\bar{a}$ = $/saa\theta a/$).

On $fr\bar{i}n\bar{a}i$ see 3.6.

$is\bar{a}i$ can be athematic, though $is\bar{o}y\bar{a}$, $is\bar{o}mna-$ are thematic ($is\bar{e}$ can be both).

Add to the list $\acute{d}y\bar{a}i$ $/\acute{d}ya'\bar{a}i/$ 29.8c. Though of uncertain interpretation, this seems to be the best analysis of the form. (It will be a $y\alpha$ -present, i.e., thematic, and a subjunctive, so $-a'\bar{a}i$. Y 29 has two or three lines with 7 - 10 -- I would hesitate to change $a\theta a$ to $a\acute{t}$ -- but only one with 7 - 8 if $\theta\beta qm$ is monosyllabic.)

The thematic forms may be grouped thus:

	<i>a'a</i> most probable	prob./poss.	improb./imposs.
3 s/p	<i>paitišāṭ</i> <i>išāntī</i> <i>hacāntē</i> <i>bairyāntē</i>	<i>vaocāṭ</i> <i>vāurāitē</i> <i>rārešyān / rā'ršyāan/</i>	
1 s	<i>hanānī</i>	<i>išasā</i>	<i>ufyānī</i>
act.	<i>sēnghānī</i> <i>vaocā</i> <i>xšayā</i>		(<i>yāsā</i> indic. ?)
mid.	<i>perēsāi</i> <i>dyāi</i> ?	<i>manyāi</i> <i>šyavāi</i> <i>xšāi</i>	<i>jasāi</i> (3x) <i>yazāi</i> (3x) <i>isāi</i> (3x; athem. ?) <i>frīnāi</i> (athem. ?) <i>səraošānē</i> (s-aor. ?)

The exceptions form a serious problem, especially *jasāi* and *yazāi*, which occur three times each, so that they are absolutely certain. One might of course think that these are the forms actually spoken by Zarathustra, but it is hard to assume that all other hiatus forms are archaisms of the religious poetic language or taken from a different dialect.

The forms of the 1 sg. are usually reconstructed thus for PIE:

	PIE			GAv.	
	ind.	subj.		ind.	subj.
Act. athem.	- <i>mī</i>	- <i>oH</i>	> - <i>ā</i>	- <i>mī</i>	- <i>ā</i>
them.	- <i>oH</i>	- <i>o-oH</i>	> - <i>ā</i>	- <i>ā</i>	- <i>a'ā̃</i>
Mid. athem.	- <i>h₂ei</i>	- <i>o-h₂ei</i>	> - <i>a'ai</i>	- <i>ē</i>	- <i>āi</i>
them.	- <i>o-h₂ei</i>	- <i>o-o-h₂ei</i>	> - <i>ā'ai</i>	- <i>ē</i>	- <i>ā̃'aĩ</i>

If the laryngeal caused hiatus, we would expect it in the middle sub-

junctive of thematic *and* athematic forms. I see no basis for a re-shuffling of hiatus that could account for the actual facts. We must assume that the laryngeal left no hiatus. If that is correct, we can be sure that *-oo-* did not either. Also, we saw in 3.7 that the evidence for hiatus from *-oo-* etc. is negative.

However, I think that the reconstruction given above is wrong. Renou (1932) has shown that the thematic forms originally were a category independent from the verbal system and that from it developed the (thematic) subjunctive (of athematic verbs) and the thematic indicative. This gives the following picture:

	PIE		Indo-Iranian	
	ind.	subj.	ind.	subj.
act. athem.	<i>-mi</i>	<i>-oH</i>	<i>-mi</i>	<i>-ā</i>
them.	<i>-oH</i>		<i>-ā</i>	
mid. athem.	<i>-h₂ei</i>	<i>-o-h₂ei</i>	<i>-ai</i>	<i>-āi</i>
them.	<i>-o-h₂ei</i>		<i>-āi</i>	

In a later phase, but still in Indo-Iranian, a thematic middle indicative form *-ai* was created. (In Gathic there is only one certain instance, *āyesē* 53.6c; *isē* could be athematic.)

For our subject the conclusion is the same: in *-oh₂ei*, the laryngeal was lost, and the hiatus must have been introduced later. Cowgill (1968:27) reached the same conclusion, though operating with *-oo-h₂ei*. Cowgill also noted that the fifteen Rigvedic instances of *-ai* are never disyllabic.

If *frīnāi* was athematic, i.e., **prinaHaHai*, the loss of laryngeal would explain monosyllabic *-āi*.

The explanation of the hiatus is simple: the stem-vowel of the thematic verbs was analogically introduced. This was possible because the language still had laryngeals. It is exactly comparable to what happened in the genitive plural. The subjunctives of the type *da'at*, *vida'at*, *fra'ā*, *ga'at*, *pa'at* probably served as a model. They could

be analyzed as having a subjunctive characterized by $-a-$ (or $-Ha-$) This means that the endings were $-a'\bar{a}$, $-a'\bar{a}i$, etc.

4. Conclusions:

At the beginning of a root, the laryngeal was probably preserved, though the evidence consists of two forms with ḡ (*usirēidyāi-*, *rārēš-* (y) $a-$) and the doubtful *as* / $a'as$ /.

As to iH , uH before vowel, we have seen that i , u were still syllabic in Gathic. The exceptions *daiḍyaṭ* and *hizvā-* may have found an explanation, but not so *x^vēnwat* and *aojya-*. The acc. sg. $-īm$ is analogical after the \bar{a} -stems. *Vairyā* proves that the laryngeal as such had disappeared some time before our texts and that Gathic had $-iya-$, $-uva-$.

Much more complex is the problem of the development of aH . The evidence of the \bar{a} -stems and especially that of the 1 sg. middle subjunctive shows that the laryngeal was lost in this position. However, there are several instances where it (or at least hiatus) is still found. To explain this situation, I see three possibilities: a different treatment of the different laryngeals; different environments; or analogical preservation/reintroduction. The first is suggested by *dyqm*, etc., which has h_1 , as against the accusative singular of the \bar{a} -stems. It is phonetically possible that eh_2m lost and eh_1m retained its laryngeal. But this should have happened at least in early Indo-Iranian (before the time that e and o and the laryngeals fell together). Vedic *syām*, etc., often have an extra syllable, though, in all persons. If it started in the 1 sg., it must have been analogically extended. I think it more probable that it was analogically retained.

I think that analogy is the explanation of the other instances of laryngeal/hiatus too. The roots *frā-*, *gā-*, *pā-*, *vidā-* had h_2 , and in these cases it cannot be due to a specific laryngeal, as it is certain that h_2 disappeared. They must therefore be explained through analogy. At the end of the root, this is quite understandable. In the genitive

plural, *-aH-* was secondarily introduced. *Mqθrā* is comparable to *dyqm*. On the other hand, *xšnēm* seems not to have been restored.

	ROOT	SUFFIX	ENDING
<i>i/uh₁</i>	<i>ərəš-jyōi</i>	<i>raiθīm</i> <i>dyā < *d(h)Hih₁h₂e</i>	
<i>i/uh₂</i>	<i>hvarə-</i> <i>x^vəng</i> <i>x^vənvat*</i>	<i>-īm*</i> <i>-iš*</i>	
<i>i/uh₃</i>	<i>(uzirəidyāi)</i>		
<i>i/uH</i>	<i>frya-</i> <i>tvēm-</i> <i>zbāya-</i> <i>dušāšōbā</i> <i>vyā-</i> <i>mruyē</i> <i>suyē</i> <i>dai^vdyat*</i>	<i>-ya- < -iHo-</i> <i>aojya-*</i> <i>tanū-</i> <i>hizū-</i> <i>hizvā-*</i>	<i>-ā (gD)</i>
<i>ah₁</i>	<i>vāta-</i> <i>dā- (subj. ?)</i> <i>mazdā-</i> <i>zrazdā-</i> <i>azāθā (?)*</i>	<i>hyēm</i> <i>dyqm</i>	
<i>ah₂</i>	<i>frā (subj.)</i> <i>gāt ,,</i> <i>pāt (?) ,,</i> <i>vidā-</i> <i>(rārəš(y)a-)</i>	<i>θβōi*</i> <i>x^vaē-*</i> <i>bərəxθē*</i> <i>-qm (aS)*</i> <i>-ā (naP)*</i> <i>ubē*</i>	<i>-āi (subj.)*</i>
<i>ah₃</i>	<i>dāh-</i> <i>hu-, duš-dāh-</i> <i>ādā-</i> <i>dā- (subj. ?)</i>		

	ROOT	SUFFIX	ENDING
aH	yāh-	maqθrā	-qm (gP)
	θβqm (?)	paθqm (?)	
	xšnēm (?)*	frīnāi (?)*	
() in anlaut; * no hiatus			

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