The Indo-Iranian laryngeal accent shift and its relative chronology

Alexander Lubotsky

§ 1. In this paper I would like to discuss one Vedic accentological rule which, as far as I know, has not been noticed before. The material which is presented below has been extracted from the reverse index of Grassmann’s Wörterbuch zum Rig-veda. From this index I have omitted words with uncertain etymology and/or meaning (in general, I follow the etymological analysis of Mayrhofer’s etymological dictionary), words of non-Indo-European origin, proper nouns, compounds (except for the first members of compounds, which are included in the material), onomatopoeic words, denominal formations, words derived from secondary verbal stems, and nonce forms.

Furthermore, suffixes which have lost the accentological opposition and show invariable accentuation were left out of consideration. For instance, all nouns formed with the suffix -nu- are oxytone in the Rgveda, cf. kṣepn-, grdhn-, dhṛṣṇ-, dhenu-, bhānu-, reṇ-, vagn-, sān-, sthānu-. Moreover, the complex suffixes -snu-, -iṣṇu-, -tnu-, -atn-, -itn- are also always oxytone. Hence, the suffix -nu- has productive oxytonesis and cannot be used.

On the other hand, some suffixes which have often been considered to have an invariable accentuation are included in the material. For example, adjectives in -u- are generally held to be productively oxytone. The majority of these adjectives is indeed oxytone, but there are still several barytone ones (ghṛṣu-, guru-, tāpu-, madhu-, vasu-, etc.), which suggests that Sanskrit had preserved the traces of the old distribution.

§ 2. Reconsidering the reliable material, we see that the i- and u-stems derived from roots with a final laryngeal (the set-roots) are predominantly oxytone:

The suffix -i-

kavi- adj. ‘skilful, wise’, m. ‘seer, poet’ < *ke/ouH-i-.
giri- m. ‘mountain, hill’ < *gṛṛH-i-.
tuvi- adj. ‘strong’ < *tuH2-i-. The accentuation follows from compounds tuvīdeṣṇa-, tuvī- brahman-, tuvīvāja-, tuvīsravas-, tuvīmagha-, and from tivigriva- with the accent shift in accordance with Wackernagel’s Law (Wackernagel 1969-79: 1108ff.; cf. for this Law below, § 10).
dhruvī- adj. 'firm' (7,35,8) < *dʰruH-i-. The connection of Skt. dhruvī- and dhruvā- adj. 'firm, fixed' with the word for 'wood' (cf., for instance, Mayrhofer s.v. dhruvā-) can hardly be maintained. For Indo-Iranian we must reconstruct *dʰruva- = *dʰruHa- (cf. A.v. drva, OP duruva ʼgesund, heilʼ), which deviates considerably from *doru- ʼwoodʼ. The IIr. word can be directly connected with Lith. drūtas ʼfirmʼ and OPr. druvi- ʼfaithʼ < *dʰruH- A lso OCS sъ-dravъ ʼhealthyʼ contains this root. The Verschärfung in PGerm. *treu-az (Goth. triggws, OIc. tryggr, etc.) also points to the presence of a laryngeal in the root, but the initial consonant must continue PIE *d-.

manī- m. ʼnecklace, jewelʼ (1,33,8) < *monHi- with irregular -η- < -n-. The presence of a laryngeal is probable in view of the short vowel in Sanskrit (Brugmann’s Law).

rayi- m.f. ʼgoods, wealthʼ < *HreH1-i-. The phonetic development of *HreH1-i- is Skt. re-, reflected in revānt- ʼrichʼ (the form rayivānt- is clearly secondary). The laryngeal has been restored in the paradigm of rayi- on the basis of oblique cases (cf. gen.sg. rāyah < *HreH1-i-os) which resulted in the form *raʔi- appearing as rayi-.

The suffix -ti-

āti- f. ʼan aquatic birdʼ < *H₂nH₂-ti-.
ištī-2 f. ʼhaste, inducementʼ < *HisH1-ti-. For the loss of the interconsonantal laryngeal see Kuiper 1947: 206ff.

āti- f. helpʼ < *H₂uH-ti-.

cāti- f. ʼglow, heatʼ < *kʷse/oH1-ti- (or *kʷse/oH1-ti-).
gūti- f. ʼpraiseʼ < *gʷrH-ti-.

The suffix -ni-

jūrī- f. ʼglow, glowing fireʼ < *gůlH-ni-. The connection with OIr. gúal ʼcoalʼ < *g̑e/oulo- and Germ. *kolo- < *gůlo- ʼidʼ (OHG chol, OE col, OIc. kol) seems plausible, especially in view of the fact that one of the meanings of Skt. jvālā-, derived from the same root, is ʼcoalʼ,
The Indo-Iranian laryngeal accent shift

cf. MS IV, 8,1 tan jvalan rsabhah samaleth `the bull licked the coals', where jvala- can hardly have the usual meaning `flame'. The barytonesis of jurhi- (1,127,10) adj. `glowing' is most probably secondary, as the author of this hymn is notorious for his verbal experiments (cf. Geldner ad loc., where he calls the author of 1,127 "wortreich, aber gedankenarm").

meni- f. `vengeance, revenge' (10,27,11) < *me/ioH-ni-.

The suffix -mi-

urmi- m. `wave' < *ulH-mi-.
jani- adj. `related as brother and sister' < *gnH1-mi-.
nemi- f. `felloe of a wheel' < *ne/oioH-mi- (Hoffmann apud Mayrhofer III 748).

The suffix -si-

dhasi- m.f. `residence, milk, food' < d'eoH1-si-.

The suffix -u-

uru- adj. `wide, broad' < *H1urH-u-.
guru- adj. `heavy' < *gwHrH-u-.
tanu- adj. `thin, small' (8,65,12) < *tnH2-u-. For the reconstruction see B iskes 1985.
puru- adj. `much, many, abundant' < *plH1-u-.
prthu- adj. `broad, large' < *pltH2-u-.
vanu- adj. `zealous, eager' < *unH-u-.
sayu- adj. `lying, resting' < *ke/oioH-u-.

The suffix -tu-

gatu- m. `way, course' < *gwH-e/oH2-tu-.
jantu- m. `creature' < *ge/onH1-tu-. For the loss of the interconsonantal laryngeal see Kuiper 1947: 206f.
jatu- in jatuibharman- `seinem Wesen nach ein Schützer' and jatuistikhir- `von Geburt kräftig, urkräftig' < *gnH1-tu-. The compounds contain most probably the instr.sg. of jatu-.

The suffix -yu-

vayu- m. `wind, air' < *H2ueH1-iu-.

The suffix -ru-

uru- m. `thigh' < *uH2-ru-, if connected with Lat. vurus. bhuru- adj. `timid, faint-hearted' < *bhiH-ru-.
To these 40 nouns we may add with a question mark:

granthi- m. `knot, tie' < \textit{I}Ir. *grantH-i-. The IE etymology of the root is unknown.

dravi- m. `reaper, mower' (6,3,4) < \textit{I}Ir. *drauH-i- (cf. Hoffmann1975-6: 420). The IE etymology of the root is unknown.

jåti- f. `haste' < \textit{I}Ir. *zuH-ti-. The IE etymology of the root is uncertain.

panu- f. `approval, praise' (1,65,4) < *pe/onH-u-. In RV. only as adv. panvā `with praise'. The IE etymology of the root is uncertain.

yatu- m. `sorcery, sorcerer' < \textit{I}Ir. *yaH-tu-. Kuiper 1973: 185ff connects this word with the root yā-t- `to injure', \textit{I}Ir. *jaH-. The IE etymology of the root is uncertain.

peru- adj. `swelling (?)' < *pe/oIH-ru-. The meaning of the word is uncertain. In 10,36,8 and 9,74,4 this word shows barytonesis, which may be secondary.

§ 3. We find but two exceptions to the pervasive oxytonesis of i- and u-stems derived from \textit{set}-roots:

- dhūti- `shaker, agitator' < *dHuH-ti- probably shows the accentuation of the vocative. This word is used in the Rgveda only as a voc.pl. (7x) and a nom.pl. (4x), while the nominative plurals occur in late hymns only: 1,64,5 (the edition of Aufrecht reads here dhūtāyah!);1,87,3; 1,168,2; and 5,61,4 (Anhang). The frequent use of the word in the vocative also explains the personification of the expected meaning `agitation, shaking', resulting in the masculine gender and active meaning.

- The accentuation of sānitu- m(?). `acquisition' (1,8,6) < *se/onH₂-tu- can be explained if we assume that the vocalization of the laryngeals was of some consequence to the accentuation. We shall return to this question below, § 9.

The other barytona are uncertain:

- The IE etymology of bhūrni- `excited, wild' is difficult.

- The etymology of cāru- adj. `agreeable, dear' is unclear. The often proposed connection with Lat. cărus `dear', Goth. hörs `adulterer', etc. < *keH₂-ru- seems improbable, because it cannot account for the palatal consonant in Sanskrit.

- The IE etymology of tārni- adj. `quick, hastening' < \textit{I}Ir. *turH-ni- is uncertain too.

- The evidence of hirni `golden' < *gH₁H-i- is contradictory: on the one hand, we find hirīśmařu- adj. `with golden beard' and hirīṁant- adj. `golden', but, on the other hand, the oxytonesis of the bahuvrīhi-compound hirīśprā- `with golden moustache' can only be explained if we reconstruct *hirī with the accent shift in accordance with Wackernagel's Law. The original accentuation is therefore unclear.

- The presence of a laryngeal in hārni- adj. `pale, yellowish', m. `yellowish horse' < *gH^e/oI(H)-i- is uncertain, as the root for `yellow, green, golden' appears in the IE languages both with and without a final laryngeal (Gr. χλωρός, Skt. hirṇya-, etc. with a laryngeal vs. Lat.
The Indo-Iranian laryngeal accent shift

helvus, Lith. želvas, etc. without a laryngeal. The compound form hiří- 'golden' belongs to hiřaṇya- 'gold' and cannot testify to a laryngeal in hiři-.

§ 4. Similarly, the i- and u-stems derived from roots with a medial laryngeal in full grade, i.e. roots of the type (C)CeHC-, are mostly oxytone:

āpi- m. 'friend' < *H₁eH₁p-i-, cf. Gr. ἡπιος 'friendly'.
āsu- adj. 'fast, quick' < *HoHk-u- (or *H₂eHk₁u-/*HeHk₂u-), cf. Gr. ὡθος 'id.'.
kāru- m. 'poet' < *keH₂r-u-.
cāyu- adj. 'showing respect' (3,24,4) < *kweH₁-i-.
tāyu- m. 'thief' < *teH₂-i-u-.
pāyu- m. 'protector' < *peH₂-i-u-.
bāhu- m. 'arm' < *bH₂g-u-.
svādū- adj. 'sweet, agreeable' < *sueH₂d-u-.

To this material we may add with a question mark sādhu- adj. 'straight, effective' < 1Ir. *sād'-u-, further connections of which are uncertain. The substantivized neuter sādu 'das Rechte' (8,32,10) is barytone, as expected.

The only counter-example, setu- m. 'band, bridge', does not allow unambiguous conclusions. If the original form of this word was *sH₂ei-tu-, the conditions were different, as the laryngeal preceded the vowel. If the original form was *seH₂i-tu-, we have two possible explanations. Either the intervocalic laryngeal was lost at an early stage, or the accent shifted to the following -i- and thus remained on the same syllable when the laryngeal was lost.

Other categories of roots with a medial laryngeal we shall discuss below.

§ 5. This pervasive oxytonesis of the derivatives in -i- and -u-from roots with a final and medial laryngeal is not of Indo-European date. In spite of the fact that the evidence from other Indo-European languages is rather limited, we do find several i- and u-stems which are derived from roots with a final or medial laryngeal but point to barytonesis.

In Greek we find only traces of the original accential distribution of the i- and u-stems: the i-stems became barytone, whereas the u-stems created a new opposition, viz. oxytone adjectives vs. barytone substantives. This distribution is relatively recent, as can be seen from the accentuation of the adjectives in -for- which represent a Greek thematicization of u-stems. We find no uniform accentuation there (cf. θοῦρος 'impetuous', λεῖος 'smooth', μοῦνος 'alone' vs. μᾶνός 'loose, rare', κεῖνος 'empty', τεναξός 'thin', etc.) and I suggest that they have preserved the original accentuation. Relevant for our purpose are θοῦρος 'impetuous', λεῖος 'smooth', and ὀδολός 'destructive', which must derive from the barytone u-adjectives *dʰorH₃-u-, *leH₂i-u-, and *H₃eH₁i-u-, respectively.
From Germanic we can mention OE mære `measure, degree; honour, respect' < *me₁-ti-, Goth. seiþus `evening' <*seH₁-tu- (cf. Lühr 1978), Goth. nauþs `need' <*nóHu-ti-.

In Balto-Slavic it is hard to find unambiguous examples of barytone i- and u-stems because of Hirt's Law, according to which the accent was retracted to a pretonic vowel if this vowel was immediately followed by alaryngeal (cf. Illich-Svitych § 31). Nevertheless, two words seem to be significant: Lith. pilis (dial. AP 2) `castle' <* (t)plH₁-ti- (Illich-Svitych § 22) and ántis (AP 1) `duck' <*H₂eH₂-ti- (Illich-Svitych § 27). The barytonesis of these words is especially important in view of generalized mobility in the Balto-Slavic i- and u-stems.

§ 6. There seems to be no way to explain the Sanskrit oxytonesis analogically, so that we must assume an accent shift from the root to the suffix. The chronology and conditions of this shift, which I shall subsequently call "the laryngeal accent shift", can be further specified, if we consider some groups of roots with a medial laryngeal where this shift apparently did not operate.

§ 7. Elsewhere (Lubotsky 1981) I have tried to demonstrate that laryngeals were lost before unaspirated voiced consonants (the mediae) in Indo-Iranian, if mediae were followed by a consonant (*-HDC- -> -DC-), cf. the following examples:

Skt. pājas- n. `frame' vs. pajar- adj. `firm', both derived from the PIE root √peH₂g- (Gr. πηγνωμι `to make fast');
Skt. rádati `to gnaw, bite' (probably, originally athematic, cf. 2sg.impv. rátsi), PIE √HreH₂d- (Lat. rādō, rādō `to scratch, bite');
Skt. svādū- adj. `sweet' vs. svādati `is sweet' (probably, originally athematic, *svad-ti), PIE √sueH₂d- (Gr. ηδους `sweet').

This rule provides a straightforward explanation for a number of short a's in Indo-Iranian without a recourse to a PIE phoneme *a and can be explained in the light of the glottalic theory, if we assume that the Indo-European unaspirated voiced consonants were originally glottalic (cf. Gamkrelidze–Ivanov 1973) and that the three laryngeals merged into a glottal stop in Indo-Iranian (cf. Polomé 1972: 244): *CeHDC = *CeH↑DC- > Ir. *CaγDC- > Ca"DC-. In our case, this rule concerns three words:

OXYTONA:

bhak-ti- `distribution' <*bH₂g-ti- (Gr. φαγεῖν);

BARYTONA:

iš-ti- f. `sacrifice' <*iH₂g-ti- (Gr. αγνώς),
yaj-yu- adj. `worshipping, pious' <*iH₂g-iu-.
As īstī- and yājyu- are barytone, they probably were not subject to the laryngeal shift, which was therefore posterior to the Indo-Iranian loss of laryngeals before mediae so that, at the time of the shift, these words did not contain medial laryngeals any more. This implies that not only īstī- and yājyu-, but also bhakti- show the original, pre-shift, accentuation.

§ 8. The laryngeal shift did not seem to operate also in words with a medial laryngeal in the root, if the root was in zero-grade. We find both oxytona and barytona, cf.

**OXYTONA:**
- kātī- f. `fame, glory' (10,54,1) < *kH₂r-ti-.
- pātī- f. `drinking, draught' < *pH₃i-ti-.
- bhūtī- f. `prosperity, power' (1,161,1) < *bʰH₂u-ti-. In 8,59,7 (Vālakhilya) this word is unaccented.

Possibly, here belongs jārī- m./f. `flowing water' < *gH₃i-ri-, if the word is etymologically connected with the family of Skt. jīvā- adj. `alive'. For the position of the laryngeal cf. Kortlandt 1975: 3, 1981:15.

**BARYTONA:**
- bhūmi- f. `earth, soil' < *bʰH₂u-mi-.
- bhūrī- adj. `much, many, abundant' < *bʰH₂u-ri-.

This group of words concerns a rather controversial issue, which is known as laryngeal metathesis. In several languages, a sequence of laryngeal plus resonant became metathesized in the position between two consonants. A detailed discussion of this phenomenon goes beyond the scope of this paper, and here I shall limit myself to indicating the main reasons for reconstructing a laryngeal preceding the resonant.

The reconstruction of pātī- f. `drinking, draught' < *pH₃i-ti-, derived from the PIE root √peH₃i- is hardly contestable. The position of the laryngeal in kātī- f. `fame, glory' follows from Skt. kār-ú- `poet', Gr. κῆρος `herald' < *keH₂-u-, Skt. kārā- `chant of victory', etc.

As far as the root √bhū- is concerned, Kortlandt has pointed out in a series of publications (1986, 1987) that there too the laryngeal preceeded the resonant. There is sufficient evidence for this view from Celtic (cf. OIr. 1,2 sg. pret. of the substantive verb -bá < *bʰw-V-), Balto-Slavic accentuation (the final accentuation in Russ. bylā), and from Sanskrit, where the unique zero-grade in singular active forms of the root aorist (abhuvam, ābhūs, abhūt) indicates that the phonetically regular forms were abnormal and were not **abhavi-, which certainly would join the -iṣ-aorist. To the evidence adduced by Kortlandt, one could add the Sanskrit 2sg. impv. aor. bodhi of the same root, which remained hitherto enigmatic and which receives a straightforward explanation if we reconstruct *bʰeH₂-u-dʰi. It follows that bodhī has preserved the original vocalism of the aorist which has been replaced by ābhūt, etc. because of the "irregular" ablaut o : ū.
Returning to the laryngeal shift, we can probably state that this shift was anterior to the laryngeal metathesis in Indo-Iranian, as can be inferred from the barytonesis of bhūmi- ‘earth, soil’ and bhūri- adj. ‘much, many, abundant’. The final accentuation of bhūti- is less significant because this word is accented only once, in the first Manḍala of the RV, and can easily be secondary, whereas an analogical accentuation of bhūmi- and bhūri- is out of the question.

§ 9. Finally, we can now return to the barytonesis of sāṇitu- ‘acquisition’ (cf. § 3 above). It is a hapax, and its accentuation may be secondary. If the barytonesis is old, we may assume that the vocalization of the interconsonantal laryngeal in this word was anterior to the accent shift. It has been suggested (cf. Beekes 1981: 283f.) that interconsonantal laryngeals were vocalized in Indo-Iranian before two consonants. This means that in the oblique cases of IIr. *sanH-tu- the laryngeal was vocalized, so that this word was not subject to the shift.

Incidentally, it can be demonstrated that the Indo-Iranian vocalization of interconsonantal laryngeals was anterior to the accent shift, indeed. From Skt. duhitā- < *dʰugH₂-ter-, whatever the problems with this word, we can see that the vocalization of the laryngeal to i was anterior to the palatalization of -g- to -j-. The palatalization, in its turn, was anterior to the merger of *e and *o into IIr. a. The latter development is probably connected with the merger of the three laryngeals into a glottal stop, which is posterior to Brugmann’s Law (cf. Lubotsky 1990). The development *H₁, H₂, H₃ > ? must be anterior to the loss of laryngeals before mediae (*ʔḌ > ‘D) and, consequently, to the accent shift (see above). To sum matters up, we get the following chain of events:

1. Brugmann’s Law (ANTE 4,5).
2. IIr. vocalization of interconsonantal laryngeals (ANTE 3);
3. Palatalization (ANTE 4);
4. Merger of *e, o, a into IIr. *a;
5. Merger of *H₁, H₂, H₃ into *ʔ (ANTE 6);
6. Loss of laryngeals before mediae (ANTE 7);
7. Laryngeal accent shift (ANTE 8);
8. Laryngeal metathesis.

§ 10. From the foregoing discussion it becomes clear that the laryngeal shift operated when both of the following conditions were fulfilled:

1. The root vowel is followed by a laryngeal (the laryngeal is not necessarily contiguous to the syllabic nucleus);
2. The word is an i- or u-stem, as the laryngeal accent shift does not affect a-stems, cf. kā-ma- m. ‘wish, desire’, pār-va- adj. ‘the first, prior’, bhā-ma- m. ‘light, splendour’, sū-na- n. ‘lack, absence’, etc.
The second condition may appear phonetically incomprehensible, but there are at least two indications that in Indo-Iranian i and u were different from a, as far as their prosodic properties are concerned.

First, the difference can be illustrated by Wackernagel’s Law, according to which words in -i-, -u-, -r- and -n- lost their accent to the following syllable in composition and secondary derivation, while words in -á- retained their accent.

Secondly, according to the RV-Prātiśākhya, the result of the so-called prasāṭa-sandhi is different for i and a. The combination of udāta + svarita on ī resulted in a svarita, but the same combination on ā resulted in an udāta, e.g. 1,22,20 divāva, 1,80,3 abhīhi, a compound abhīti- vs. ihāsti, etc. This difference can be explained if we assume that the udāta of ī was lower than that of a. A similar explanation is necessary in the case of Wackernagel’s Law where the accented ī, u, etc. do not keep the accent.

There is a major phonological difficulty with the laryngeal accent shift, however. Vowels followed by laryngeals attract the accent in most cases (cf. de Saussure’s Law for Lithuanian, Hirt’s Law for Balto-Slavic) or block a progressive shift (Dybo’s Law for Slavic). Therefore, a progressive accent shift from a ‘laryngealized’ vowel is incomprehensible, especially when the accent shifts to i or u, which should repel the accent rather than attract it. I cannot resolve this difficulty, but the evidence has priority, and we may find an explanation later.

§ 11. To sum up, all i- and u-stems derived from roots with a final or medial laryngeal are oxytone in Sanskrit, due to the Indo-Iranian laryngeal accent shift. This means that all words which were subject to the shift are ambiguous as far as their accentuation is concerned and cannot bear testimony to the Indo-European situation. On the other hand, note that in case of doubt about the correct reconstruction, we are now better in the position to choose between the alternatives. For instance, the barytonesis of hari- adj. ‘pale, yellowish’ indicates that the root probably has no final laryngeal, while the oxytonesis of mañi- m. ‘necklace, jewel’ is an argument in favour of a final laryngeal.

References


Kuiper, F.B.J. (1973): Four word studies. IIJ 15, 179-204.


