Originally appeared in: *Rekonstruktion und relative Chronologie. Akten der VIII. Fachtagung der Indogermanischen Gesellschaft, Leiden, 31. August–4. September 1987*, ed. R. Beekes, A. Lubotsky, J. Weitenberg. Innsbruck (IBS) 1992, 261-269.

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 *-nú-* are oxytone in the Ṛgveda, cf. *kṣepnú-*, *gr̥dhnú-*, *dhr̥ṣṇú-*, *dhenú-*, *bhānú-*, *reṇú-*, *vagnú-*, *sūnú-*, *sthāṇú-*. Moreover, the complex suffixes *-snú-*, *-iṣṇú-*, *-tnú-*, *-atnú-*, *-itnú-* 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 (*ghŕ̥ṣu-*, *táku-*, *tápu-*, *mádhu-*, *vásu-*, 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 *seṭ*-roots) are predominantly oxytone:

The suffix *-i-*

kaví- adj. `skilful, wise', m. `seer, poet' < **ke/ouH-i-*.

girí- m. `mountain, hill' < **g^{w}rH-i-*.

tuví° adj. `strong' < **tuH$_2$-i-*. The accentuation follows from compounds *tuvídeṣṇa-*, *tuví-brahman-*, *tuvívāja-*, *tuvíśravas-*, *tuvímagha-*, and from *tivigrīva-* with the accent shift in accordance with Wackernagel's Law (Wackernagel 1969-79: 1108ff.; cf. for this Law below, § 10).

dhruví- adj. `firm' (7,35,8) < *\*dʰruH-i-*. The connection of Skt. *dhruví-* and *dhruvá-* adj. `firm, fixed' with the word for `wood' (cf., for instance, Mayrhofer s.v. *dhruvá-*) can hardly be maintained. For Indo-Iranian we must reconstruct *\*dʰruu̯a-* = *\*dʰruHa-* (cf. Av. *drva*, OP *duruva* `gesund, heil'), which deviates considerably from **doru-* `wood'. The IIr. word can be directly connected with Lith. *drū́tas* `firm' and OPr. *druwi-* `faith' < *\*d(ʰ)ruH-*. Also OCS *sъ-dravъ* `healthy' contains this root. The *Verschärfung* in PGerm. **treu̯u̯az* (Goth. *triggws*, OIc. *tryggr*, etc.) also points to the presence of a laryngeal in the root, but the initial consonant must continue PIE **d-*. 262

maṇí- m. `necklace, jewel' (1,33,8) < **monHi-* with irregular *-ṇ-* < *-n-*. The presence of a laryngeal is probable in view of the short vowel in Sanskrit (Brugmann's Law).

rayí- m.f. `goods, wealth' < *\*HreH₁-i-*. The phonetic development of *\*HreH₁-i-* is Skt. *re-*, reflected in *revánt-* `rich' (the form *rayivánt-* is clearly secondary). The laryngeal has been restored in the paradigm of *rayí-* on the basis of oblique cases (cf. gen.sg. *rāyás* < **HreH₁-i-os*) which resulted in the form **raʔi-* appearing as *rayí-*.

saní- m. `gaining' < **s(e)nH₂-i-*.

The suffix -ti-

āti- f. `an aquatic bird' < **H₂nH₂-ti-*.

*iṣṭí-*₂ f. `haste, inducement' < **HisH₁-ti-*. For the loss of the interconsonantal laryngeal see Kuiper 1947: 206ff.

ūti- f. help' < **H₂uH-ti-*.

kṣāti- f. `glow, heat' < **kse/oH₁-ti-* (or **kʷse/oH₁-ti-*).

gūrti- f. `praise' < **gʷrH-ti-*.

jn̥āti- m. `kinsman' < *\*gnoH₁-ti-*, cf. for the reconstruction Goth. *knodai* dat.sg.f. `family' and Latv. *znuots* `son-in-law'.

dhīti- f. `thought, prayer' < **dʰiH-ti-*.

dhūrti- f. `damage' < **dʰurH₁-ti-*.

pūrti- f. `gift, reward' < **prH₃-ti-*.

rāti- f. `gift, favour' < **Hre/oH₁-ti-*.

rīti- f. `stream' < **H₃riH-ti-*.

vīti- f. `sacrifice-meal' < **uiH₁-ti-*.

sāti- f. `obtaining' < **snH₂-ti-*.

sphāti- f. `breeding, fattening' < **spe/oH₁-ti-*.

The suffix -ni-

jūrṇí- f. `glow, glowing fire' < *\*gulH-ni-*. The connection with OIr. *gual* `coal' < **ge/oulo-* and Germ. **kolo-* < **gulo-* `id.' (OHG *chol*, OE *col*, OIc. *kol*) seems plausible, especially in view of the fact that one of the meanings of Skt. *jvālá-*, derived from the same root, is `coal',

cf. MS IV,8,1 *tā́n jvālā́n ṛ̊ṣabhā́ḥ sā́maleṭ* `the bull licked the coals', where *jvālā́-* can hardly have the usual meaning `flame'. The barytonesis of *jū́rṇi-* (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"). 263

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

The suffix *-mi-*

ūrmī́- m. `wave' < **ulH-mi-*.

jāmī́- adj. `related as brother and sister' < **ǵnH₁-mi-*.

nemī́- f. `felloe of a wheel' < **ne/oiH-mi-* (Hoffmann apud Mayrhofer III 748).

The suffix *-si-*

dhāsī́- m.f. `residence, milk, food' < **dʰe/oH₁-si-*.

The suffix *-u-*

urú- adj. `wide, broad' < **H₁urH-u-*.

gurú- adj. `heavy' < **gʷrH₂-u-*.

tanú- adj. `thin, small' (8,65,12) < **tnH₂-u-*. For the reconstruction see Beekes 1985.

purú- adj. `much, many, abundant' < **plH₁-u-*.

pṛ̊thú- adj. `broad, large' < **pltH₂-u-*.

vanú- adj. `zealous, eager' < **unH-u-*.

śayú- adj. `lying, resting' < **ḱe/oiH-u-*.

The suffix *-tu-*

gātú- m. `way, course' < **gʷe/oH₂-tu-*.

jantú- m. `creature' < **ǵe/onH₁-tu-*. For the loss of the interconsonantal laryngeal see Kuiper 1947: 206f.

jātú° in *jātū́bharman-* `seinem Wesen nach ein Schützer' and *jātū́ṣṭhira-* `von Geburt kräftig, urkräftig' < **ǵnH₁-tu-*. The compounds contain most probably the instr.sg. of *jātú-*. The adverb *jā́tu* (10,27,11) `von Geburt', in later texts `at all, perhaps', is barytone, possibly due to the reinterpretation of **jātú* < *jātū́* (with shortening in pausa) as acc.sg. neuter.

The suffix *-yu-*

vāyú- m. `wind, air' < **H₂ueH₁-iu-*.

The suffix *-ru-* 264

ūrú- m. `thigh' < **uH₂-ru-*, if connected with Lat. *vārus*.

bhīrú- adj. `timid, faint-hearted' < **bʰiH-ru-*.

To these 40 nouns we may add with a question mark:

granthí- m. `knot, tie' < IIr. **grantH-i-*. The IE etymology of the root is unknown.

draví- m. `reaper, mower' (6,3,4) < IIr. **drauH-i-* (cf. Hoffmann1975-6: 420). The IE etymology of the root is unknown.

jūtí- f. `haste' < IIr. **źuH-ti-*. The IE etymology of the root is uncertain.

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

yātú- m. `sorcery, sorceror' < IIr. *\*yaH-tu-*. Kuiper 1973: 185ff connects this word with the root *yā-*$_3$ `to injure', IIr. **i̯aH-*. The IE etymology of the root is unknown.

perú- 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 *seṭ*-roots:

– *dhū́ti-* `shaker, agitator' < **d^{h}uH-ti-* probably shows the accentuation of the vocative. This word is used in the Ṛ̊gveda 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 *dhūtáyaḥ*!);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 *sánitu-* m(?). `acquisition' (1,8,6) < **se/onH$_2$-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 *bhū́rṇi-* `excited, wild' is difficult.

– The etymology of *cā́ru-* adj. `agreeable, dear' is unclear. The often proposed connection with Lat. *cārus* `dear', Goth. *hōrs* `adulterer', etc. < **keH$_2$-ru-* seems improbable, because it cannot account for the palatal consonant in Sanskrit.

– The IE etymology of *tū́rṇi-* adj. `quick, hastening' < IIr. **turH-ni-* is uncertain too.

– The evidence of *hírí°* `golden' < *\*g$^h$lH-i-* is contradictory: on the one hand, we find *hírísmasru-* adj. `with golden beard' and *hírīmant-* adj. `golden', but, on the other hand, the oxytonesis of the *bahuvrīhi*-compound *hiriśipra-* `with golden moustache' can only be explained if we reconstruct **hirí°* with the accent shift in accordance with Wackernagel's Law. The original accentuation is therefore unclear.

– The presence of a laryngeal in *hári-* adj. `pale, yellowish', m. `yellowish horse' < **g^{h}e/ol(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. *hiraṇya-*, etc. with a laryngeal vs. Lat.

helvus, Lith. *žel˙vas*, etc. without a laryngeal). The compound form *hírī°* `golden' belongs to *híraṇya-* `gold' and cannot testify to a laryngeal in *hári-*.

§ 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:

ā́pi- m. `friend' < *\*H₁eH₁p-i-*, cf. Gr. ἅπιος `friendly'.
ā́śú- adj. `fast, quick' < *\*HoHḱ-u-* (or *\*H₃eHḱu-/\*HeH₃ḱu-*), cf. Gr. ὠκύς `id.'.
kā́rú- m. `poet' < **keH₂r-u-*.
cā́yú- adj. `showing respect' (3,24,4) < **kʷeHi-u-*.
tā́yú- m. `thief' < **teH₂i-u-*.
pā́yú- m. `protector' < **peH₂i-u-*.
bā́hú- m. `arm' < **bʰeH₂ǵ-u-*.
svā́dú- adj. `sweet, agreeable' < **sueH₂d-u-*.

To this material we may add with a question mark *sādhú-* adj. `straight, effective' < IIr. *\*sādʰ-u-*, further connections of which are uncertain. The substantivized neuter *sā́dhu* `das Rechte' (8,32,10) is barytone, as expected.

The only counter-example, *sétu-* m. `band, bridge', does not allow unambiguous conclusions. If the original form of this word was **sH₂éi-tu-*, the conditions were different, as the laryngeal preceded the vowel. If the original form was **séH₂i-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 accentual 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 *-ϝo-* which represent a Greek thematicization of *u*-stems. We find no uniform accentuation there (cf. θοῦρος `impetuous', λεῖος `smooth', μοῦνος `alone' vs. μᾱνός `loose, rare', κεινός `empty', τανᾱός `thin', etc.) and I suggest that they have preserved the original accentuation. Relevant for our purpose are θοῦρος `impetuous', λεῖος `smooth', and οὖλος `destructive', which must derive from the barytone *u*-adjectives **dʰórH₃-u-*, **leH₁i-u-*, and **H₃élH₁-u-*, respectively.

From Germanic we can mention OE *mǣþ* `measure, degree; honour, respect' < *\*meH₁-ti-*, Goth. *seiþus* `evening' <**seH₁i-tu-* (cf. Lühr 1978), Goth. *nauþs* `need' <**noHu-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. *pilìs* (dial. AP 2) `castle' < * *(t)pl̥H-i-* (Illich-Svitych § 22) and *ántis* (AP 1) `duck' < **H₂enH₂-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. 266

§ 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. *pā́jas-* n. `frame' vs. *pajrá-* adj. `firm', both derived from the PIE root √**peH₂ǵ-* (Gr. πήγνῡμι `to make fast');

Skt. *rádati* `to gnaw, bite' (probably, originally athematic, cf. 2sg.impv. *rátsi*), PIE √*\*HreH₂d-* (Lat. *rādō, rōdō* `to scratch, bite');

Skt. *svādú-* adj. `sweet' vs. *svádati* `is sweet' (probably, originally athematic, **svad-ti*), PIE √**sueH₂d-* (Gr. ἡδύς `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 = *CeHˀDC-* > IIr. **CaʔˀDC-* > *CaˀDC-*. In our case, this rule concerns three words:

OXYTONA:

bhak-tí- `distribution' < **bʰeH₂ǵ-ti-* (Gr. φαγεῖν);

BARYTONA:

íṣ-ṭi- f. `sacrifice' < **iH₂ǵ-ti-* (Gr. ἁγνός),

yáj-yu- adj. `worshipping, pious' < **ieH₂ǵ-iu-*.

As *íṣṭi-* and *yájyu-* 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 *íṣṭi-* and *yájyu-*, but also *bhaktí-* 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:

kīrtí- f. `fame, glory' (10,54,1) < **kH₂r-ti-*.

pītí- f. `drinking, draught' < **pH₃i-ti-*.

bhūtí- f. `prosperity, power' (1,161,1) < **bʰH₂u-ti-*. In 8,59,7 *(Vālakhilya)* this word is unaccented.

Possibly, here belongs *jīrí-* m./f. `flowing water' < *\*gʷH₃i-ri-*, if the word is etymologically connected with the family of Skt. *jīvá-* adj. `alive'. For the position of the laryngeal cf. Kortlandt 1975: 3, 1981:15.

BARYTONA:

bhū́mi- f. `earth, soil' < **bʰH₂u-mi-*.

bhū́ri- 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 *pītí-* f. `drinking, draught' < *\*pH₃i-ti-*, derived from the PIE root √*\*peH₃i-* is hardly contestable. The position of the laryngeal in *kīrtí-* f. `fame, glory' follows from Skt. *kār-ú-* `poet', Gr. κῆρυξ `herald' < **keH₂r-u-*, Skt. *kārá-* `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* < **bʰāw-V-*), Balto-Slavic accentuation (the final accentuation in Russ. *bylá*), and from Sanskrit, where the unique zero-grade in singular active forms of the root aorist (*ábhuvam*, *ábhūs*, *ábhūt*) indicates that the phonetically regular forms were abnormal and were not ***ábhavi-*, which certainly would join the *-iṣ-*aorist. To the evidence adduced by Kortlandt, one could add the Sanskrit 2sg. impv. aor. *bodhí* of the same root, which remained hitherto enigmatic and which receives a straightforward explanation if we reconstruct **bʰeH₂u-dʰi*. It follows that *bodhí* has preserved the original vocalism of the aorist which has been replaced by *ábhūt*, 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 *bhū́mi-* f. `earth, soil' and *bhū́ri-* adj. `much, many, abundant'. The final accentuation of *bhūtí-* is less significant because this word is accented only once, in the first Maṇḍala of the RV, and can easily be secondary, whereas an analogical accentuation of *bhū́mi-* and *bhū́ri-* is out of the question.

§ 9. Finally, we can now return to the barytonesis of *sánitu-* `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. 268
**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. *duhitár-* < **dʰugH₂-tér-*, 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 *-ǰ-*. 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 > ʔ* must be anterior to the loss of laryngeals before mediae (**ʔʔD > ʔD*) 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. *ká-ma-* m. `wish, desire', *pū́r-va-* adj. `the first, prior', *bhá-ma-* m. `light, splendour', *sú-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 *-í-*, *-ú-*, *-ṛ́-* and *-ṇ́-* 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 *praśliṣṭa*-sandhi is different for *i* and *a*. The combination of *udātta* + *svarita* on *ī* resulted in a *svarita*, but the same combination on *ā* resulted in an *udātta*, e.g. 1,22,20 *divī̀va*, 1,80,3 *abhī̀hi*, a compound *abhī̀ti-* vs. *ihā́sti*, etc. This difference can be explained if we assume that the *udātta* of *i* was lower than that of *a*. A similar explanation is necessary in the case of Wackernagel's Law where the accented *í*, *ú*, 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. 269

§ 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 *hárі-* adj. `pale, yellowish' indicates that the root probably has no final laryngeal, while the oxytonesis of *maṇí-* m. `necklace, jewel' is an argument in favour of a final laryngeal.

References

Beekes, R.S.P. (1981): The Neuter Plural and the Vocalization of the Laryngeals in Avestan. *IIJ* 23,4, 275-287.

Beekes, R.S.P. (1985): Skt. *uttānā́-*. *KZ* 98, 47-8.

Gamkrelidze T., Ivanov, V. (1973): Sprachtypologie und die Rekonstruktion der gemeinindogermanischen Verschlüsse. *Phonetica* 27, 150-156.

Grassmann, H.: *Wörterbuch zum Rig-veda.* Wiesbaden, 1976[5].

Hoffmann, K. (1975-6): *Aufsätze zur Indoiranistik*. 2 vols. Wiesbaden.

Illich-Svitych V.M.: *Imennaja akcentuacija v baltijskom i slavjanskom: Sud'ba akcentuacionnyx paradigm*, Moskva, 1963. = V.M. Illich-Svitych, *Nominal Accentuation in Baltic and Slavic*, trans. R.L. Leed and R.F. Feldstein, Cambridge, Mass., 1979.

Kortlandt, F.H.H. (1975): *Slavic accentuation*. Lisse.

Kortlandt, F.H.H. (1981): More evidence for Italo-Celtic. *Éríu* 32, 1-22.

Kortlandt, F.H.H. (1986): Posttonic **w* in Old Irish. *Éríu* 37, 89-92.

Kortlandt, F.H.H. (1987): Archaic ablaut patterns in the Vedic verb, *Fs. H. Hoenigswald*, Tübingen, 219-223.

Kuiper, F.B.J. (1947): Traces of laryngeals in Vedic Sanskrit. *India Antiqua (Fs. Vogel),* Leyden, 198-212.

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

Lubotsky, A. (1981): Gr. *pḗgnumi*: Skr. *pajrá-* and loss of laryngeals before mediae in Indo-Iranian. *MSS* 40, 133-138.

Lubotsky, A. (1990): La loi de Brugmann et **H$_3$e*. *La reconstruction des laryngales (Bibliothèque de la Faculté de Philosophie et Lettres de l'Université de Liège, fascicule CCLIII).* No editor. Liège - Paris (1990), 129-136.

Lühr, R. (1978): Die germanische Wörter für `seit' und Verwandtes. *MSS* 37, 121-130.

Mayrhofer, M.: *Kurzgefasstes etymologisches Wörterbuch des Altindischen.* 4 vols. Heidelberg, 1956-1980.

Polomé, E. (1972): Reflexes of laryngeals in Indo-Iranian with special reference to the problem of the voiceless aspirates. *Saga og språk (Fs. L.M. Hollander).* Austin, 233-251.

Wackernagel, J. (1969-79): *Kleine Schriften.* 3 Bde. Göttingen.