

REVIEW ARTICLE

On the reduced grade *-a-* in Sanskrit

Review of T. Burrow, *The problem of shwa in Sanskrit**

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Ljošen'ke

Since Brugmann the reconstruction of shwa (or, a reduced vowel) was considered necessary in order to explain correspondences like Skt. *pitár-*: Gr. *patér*, Lat. *pater* (PIE **pater-*); Skt. *sthitá-*: Gr. *statós*, Lat. *status* (PIE **státós*). This shwa was regarded as a weak grade of original long vowels, due to a shift of the accent.

This reconstruction remained practically unchallenged until Burrow published an article (Burrow 1949), in which he argued that in Sanskrit the weak grade of original long vowels always yields zero or an aspiration of the preceding stop, while Skt. *i* has never any other origin but PIE **i*. The correspondences of 'European' *a* to Skt. *i* were explained as a difference in the form of the suffix: e.g., Gr. *statós* was analysed as **stH₂-etos*, Skt. *sthitá-* as **stH₂-itos*.

Six years later Burrow incorporated this theory in his *The Sanskrit Language*, but although the general reaction was clearly negative, there was not much detailed criticism in the reviews. In any case, this criticism did not convince Burrow, and since the rejection of shwa forms the basis of the book under review too, I would like to dwell at length on a number of points which make Burrow's rejection of the shwa untenable.

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1. Paradigmatic interchange in Sanskrit between \bar{a} and i

A. Mayrhofer 1955:900; Gonda 1957:289.

The 5th, 7th and 9th present classes (nasal presents) are analysed by Burrow as follows (Burrow 1955:327; I cite the first edition of the book, as Burrow did not change the chapters relevant to our discussion in the subsequent editions): $\acute{s}r\dot{n}\acute{o}ti < *k\dot{l}-n-\acute{e}w-ti$; $yun\acute{a}kti < *yu-n-\acute{e}g-ti$; $p\dot{r}\dot{n}\acute{a}ti < *p\dot{l}-n-\acute{e}H-ti$. In view of the parallel formation of the singular of these present classes we can assume that the plural is also formed in parallel: $\acute{s}r\dot{n}um\acute{a}h < *k\dot{l}-n-u-m\acute{e}s$; $yun\dot{h}j\acute{m}\acute{a}h < *yu-n-g-m\acute{e}s$; $p\dot{r}\dot{n}im\acute{a}h < *p\dot{l}-n-H-m\acute{e}s$. Burrow cannot draw this conclusion and must posit for the last form $*p\dot{l}-n-H-im\acute{e}s$, which is inexplicable (Burrow 1955:326).

B.

Nom.-acc. pl. ntr. of the consonantal stems in Skt. and Avestan has the ending $-i$, while a -stems have $-\bar{a}$ (similarly, i -stems have $-i$, u -stems $-\bar{u}$ and n -stems $-\bar{a} < *nH$). The ending is $*H_2$, which can be seen from the Greek $-a$. Burrow's explanation that this ending was adopted from the thematic inflection (Burrow 1955:237) seems improbable, because $*-eH_2$ would yield Gr. $-\bar{a}$ or, in Attic, $-\bar{e}$ (cf. nom. sg. of fem. \bar{a} -stems: ion. att. $t\acute{i}m\acute{e}$, dor. aeol. $t\acute{i}m\acute{a} < *-eH_2$ [Rix 1976:130]). The short $-a$ of the o -stems ($zug\acute{a}$) must have been adopted from the consonantal stems. As for the problems concerning the Avestan material and its relation to the Hittite see now Beekes 1981.

2. Paradigmatic interchange $-i$ - $-\emptyset$ - ($-H$ -: $-\emptyset$ -)

That the interchange $-i$ - $-\emptyset$ - can be paradigmatic was stated for the first time by Kuiper (1947:203ff). He pointed out that of the pairs $j\acute{a}niman$ -/ $j\acute{a}nman$ -, $mahim\acute{a}n$ -/ $mahm\acute{a}n$ -, etc. the forms with $-i$ - originally occurred only in the strong cases. This presupposes a Proto-Indian inflection:

NAsg. $*j\acute{a}nima < *g\acute{e}nHm\dot{n}$

Gsg. $*janmn\acute{a}h < *g\acute{e}nHmn\acute{e}s$

with a distribution $-i$ - $-\emptyset$ - according to the position of the accent. This explanation seems to me more likely than an arbitrary mixture of the suffix variants proposed by Burrow (1949:37ff). Burrow suggested the same solution for the problem of two stems for the word for 'father' in Avestan:

ptar- (*tar-*) and *pitar-*, arguing that “the difference between these two sets of forms is not to be explained as a variation in the phonetic development of the same original form, since, as elsewhere, no adequate reason can be found for the variation” (Burrow 1949: 39).

All these Avestan forms were recently thoroughly re-examined by Beekes (1981:00ff), who, on the basis of Kuiper’s ideas, came to the following Proto-Avestan paradigm:

N. sg. *ptá*

A. sg. *ptáram*

G. sg. *piθráh* etc.

He draws the same conclusion as Kuryłowicz (1968:225, n. 2), that *pt-* occurs before the terminations beginning with a vowel, *pit-* before the terminations with an initial consonant. This rule can only be explained if we assume that the laryngeal was vocalized (**pHté*: **pHtrés*). A connecting vowel *-i-* to facilitate pronunciation is much less probable (cf. the analogical Gāthīc formation D. sg. *fəδrōi/fδrai*!).

3. *The absence of the aspiration of a preceding stop in some words (Mayrhofer 1955:900)*

Although a stop followed by a laryngeal plus a vowel always develops into an aspirate, e.g. *prthú-* < **p|t-H₂-ú-*, G. sg. *maháḥ* < **megH₂-e/os* etc., we do not find aspiration in a number of words. The absence of the aspiration in *pítár-*, *patitá-*, *roditi* etc. cannot be explained if we posit a suffix beginning with *i*, as Burrow proposes, while reconstructing **pHtér-*, **petHtó*, **reudHti* etc. we can apply to the rule that the interconsonantal laryngeals do not aspirate a preceding stop. Words like *sthitá-* < **stHtó-* have their aspirate from the forms where the laryngeal stood before a vowel (for *sthitá-* it was possibly the present *tiṣṭhati* < **ti-stH-e-ti*).

4. *Different vocalizations of laryngeals in Sanskrit and ‘European’*

This argument against the theory of Burrow was adduced by Martinet (1956:305ff), who after a long discussion of the matter remarked: “if the *-i-* of Skt. *sthitá-* can be explained as suffixal and the **ə > i* formula dispensed with, there are, in the European branches of Indo-European, too many *a*’s that can by no means be accounted for as the initial vowels of

alternate forms of existing derivational elements: it may be all right to analyse *duhitár-* as *duh-itár-* and even *pitár-* as *p-itár-*, but a suffix *-atēr* makes no sense in Greek, neither in *thugátēr* nor in *patér*” (p. 306). I do not think this is a decisive argument, because the laryngeals can be vocalized more or less easily in the different languages, so that if the interconsonantal laryngeal would yield zero in Sanskrit this does not directly imply that it must be the case in Greek and vice versa. Burrow, however, found this argument very convincing and began to look for examples where the interconsonantal laryngeal yields *a* in Sanskrit, as it does in many other languages.

The result of his investigation is presented in the book under review, where Burrow argues that “in addition to the zero grade, and a good deal more frequently, there is a reduced grade *-a-* in Sanskrit from the original long vowels, which corresponds exactly to the *-a-* of the Western IE languages ...” (p. 3).

Some scholars before Burrow regarded it necessary to see *-a-* in some words as a weak grade of the long vowels in Sanskrit (for them this weak grade was shwa). The number of the cases and the explanations of this phenomenon differed considerably (de Saussure [1922: 160ff] ascribed it to the working of the accent, Hübschmann [1885: passim] limited it to the clusters *-əi-* and *-əu-*, etc.), only the wish to keep it restricted to certain words or to a special combination of sounds was a common feature. This situation was reflected in Wackernagel 1896: 5f, where some twenty words are enumerated with *-a-* representing the IE shwa.

Burrow was the first to put aside these restrictions. He presented in his book all the evidence he could gather for the *-a-*, which he sees as another ablaut grade of original long vowels. Burrow calls this grade ‘the reduced grade’, equating it with the ‘Western’ *-a-*.

This equation, however, cannot be maintained. The ablaut grade in Greek, for instance, which Burrow calls ‘reduced’ (normally known as the zero grade) is in complementary distribution with his zero grade. The zero occurs in the position before vowels, while the ‘reduced’ grade occurs between consonants. For another reduced grade there is no room (cf. Rix’s statement for Greek: “Der Ansatz einer Reduktionsstufe zwischen Voll- und Schwundstufe ist nirgends notwendig” [Rix 1976: 33]).

In Sanskrit the situation is quite different. No phonetic distribution can be found between the zero grade and the reduced grade, both being explained by Burrow as a weakening of the original long vowels due to a shift of the accent. Moreover, this reduced grade has no morphologic status. It occurs,

according to Burrow, in those forms, where otherwise the zero grade is expected. For instance, on p. 38 Burrow explains the *ta*-participles *ghrātá-*, *snātá-*, *trātá-*, etc. (from the roots *ghrā-*, *snā-*, *trā-*) as substitutions for the original **ghrata-*, **snata-*, **trata-*, etc., while on p. 8 he remarks: “double zero is a characteristic feature of the ablaut of disyllabic roots whose internal consonant is a semivowel or liquid”.

The reduced grade is also difficult to reconcile with the laryngeal theory, in spite of the remark of Burrow on p. 31 that the assumption of a full set of original IE laryngeals does not make any difference to the main conclusion reached in his book. As a matter of fact, the laryngeal theory analyses the so-called original long vowels \bar{e} , \bar{a} , \bar{o} as eH_1 , eH_2 , eH_3 and equates them with the diphthongs *ei*, *eu*, *er*, *el*, *en* and *em*. The expected weak grade of the long vowels is then H_1 , H_2 , H_3 , just as the weak grade of other diphthongs is a pure sonant. Within the limits of the laryngeal theory we may not posit a second weak grade, the reduced grade, for the diphthongs with laryngeals, if no such grade can be demonstrated for the other diphthongs.

I think this was also the reason why in the book under review Burrow abandoned the laryngeal theory in its classical form and used Brugmann's system throughout the book. Theoretically, however, he adopted the position proclaimed by Szemerényi (1970:131), that an IE laryngeal is *only* to be assumed when *h* appears in Hittite, but he failed to combine it with the Sanskrit evidence. Of the words where the working of laryngeals (e.g., so-called long sonants, Brugmann's law, aspiration of a preceding stop) can be established, only a few have a corresponding *h* in Hittite. To account for the rest, a “secondary” laryngeal is proposed by Burrow, a glottal stop remaining after the elision of an original long vowel and having precisely the same reflexes as the original laryngeal. This reconstruction seems to me highly doubtful. Firstly, I do not understand how the elision of a vowel can bring forth a consonant, and secondly, one has to make most unusual reconstructions to explain the Sanskrit forms. For example, Burrow proposes to derive Skt. *duhitár-* from a base **dhugā-*, which has no parallels in PIE (p. 28), or connects the Hitt. *hi*-conjugation with the PIE thematic flexion to explain the aspirated consonant in Skt. *ahám* ‘I’ (**eġ-H-óm* with *H* from 1sg. $-\bar{o}$ of the thematic flexion, as Gr. *egō* < **eġ-oH*).

Furthermore, the materials assembled by Burrow do not provide convincing proof of his theory of the reduced grade *-a-* in Sanskrit. On the following pages I will seek to demonstrate that either the analyses suggested by Burrow are improbable or that the evidence can be explained satisfactorily

in another manner. I will retain the order established in the book. Chapter II is devoted to the reduced grade of the roots in \bar{a} , chapter III to that of the roots of the $C\bar{a}C$ structure. Chapter IV attempts to demonstrate that there is no interchange $\bar{a} : i$ inside the root in Sanskrit. In chapter V examples of the reduced grade in suffixes are adduced, while the final chapter is devoted to the question of the origin of the connecting $-i-$ in Sanskrit. The main stress of this discussion will be laid on chapters II-III, while on chapters IV-VI only some general remarks will be given.

p. 12–14: present stems in $-aya-$ from roots in \bar{a} (*dháyati* ‘sucks’, *dáyate* ‘shares’, *hváyati* ‘calls’, etc.) are analysed as reduced grade of the root + $-ya-$.

The usual analysis of these forms is $h\bar{u}- + \acute{a}ya-$, etc., i.e. as presents of the 10th class with the zero grade of the root (cf., e.g., Kuiper 1974: 122 for *vidayate* < $*vi-dH_2\acute{e}y-e-toi$, Kuiper 1973: 194f for *hváyate* < $*\acute{g}huH\acute{e}y-e-ti$). Burrow’s main argument against this analysis is that the suffix $-aya-$ is impossible in the three forms *hváyati*, *sváyati* and *vyáyati*, and since it is to be excluded in these forms, it should be also excluded in the similarly formed *dháya-*, etc. Burrow writes: “If a suffix $-aya-$ were added to these roots in the zero grade ($h\bar{u}-$, $\acute{s}\bar{u}-$, $v\bar{i}-$) the result could only be $*huv\acute{a}ya-$ etc. ... No such forms occur, and Vedic metre shows that these stems are disyllabic...” (p. 13). But, as a matter of fact, these forms do occur! RV. 6,26,1a and 33,4c read *huv\acute{a}y\acute{a}masi*, i.e. with trisyllabic base, which means that the only possible reconstruction is $*\acute{g}huH\acute{e}y-e-mesi$. This is confirmed by the GAv. evidence too. In those lines where the 1sg. *zbay\acute{a}* and the dat. sg. ptc. *zbayent\acute{e}* occur, the metre lacks one syllable, which suggests a hiatus ($/zu\acute{a}y\acute{a}/$, $/zu\acute{a}yantai/$). Cf. Kuiper 1973: 194–9, 1978: 9f; Monna 1978: 97, 199. The suffix $-aya-$ thus being established, can also be posited for other roots in long \bar{a} .

p. 15: Av. *apa.x^aanvainti* = $x^a\text{-}nu-$ ($x^a\bar{a}-$ ‘to repel’);

p. 16: Av. *sp\acute{a}nvaṭ/spanvanti* = $spa\text{-}nu-$ ($sp\acute{a}-$ ‘to prosper’);

p. 35: Av. *fra-stanvanti* = $sta\text{-}nu-$ ($fra\text{-}st\bar{a}-$ ‘to proceed’).

As these forms occur only when the ending begins with a vowel, the analysis of Burrow is doubtful, because it cannot account for this distribution. I suggest that here $-an-$ represents vocalic η , which has this reflex in Indo-Iranian in the position before i , u and m (cf. Wackernagel 1896: 10ff; Reichelt 1909: 62). Av. *stanv-* is then parallel to Greek (Cret.) *stanúō* < $*stH_2\text{-}nu\text{-}oH_1$, only with a different vocalization: $*stH_2\text{-}\eta\text{-}V-$, which is understandable, since Greek vocalizes the laryngeals before it vocalizes the

sonants, Indo-Iranian the other way round. Similarly, the stem of the obscure *spanvanti* may represent **spH₁-n₁-V-* (*spānvat* Y.51.21 is most probably an adjective in *-vant-* from *spān-*). Av. *apa.x^vanvainti* can formally be connected with Skt. *svan-* ‘to sound’ – an etymology, lastly defended by Narten (1970) – but there remain serious semantic problems. I propose therefore to see in *x^vanvainti* the same development, as in *stanvanti*: **suH-n₁-énti* > **suH-an₁-énti* > *x^vanvainti*. The probability of such a development is confirmed by GAv. *hvānmahī* ‘we drive on’ and *fryānmahī* ‘we love’. Hoffmann (1975:70) regarded *q* in these forms as a kind of nasalization sign, the groups *vq*, *yq* representing nasal *u* and *i*. This, however, is not supported by the Gāthā material, since the group *qnm* always represents in the Gāthā’s *ānm* < **anm* (cf. the usage of *q* as *ṛ* before spirants: *nṛaṣ*, *mṛaṣdyāi*, etc.): we find *qnmān-* ‘spirit, soul’ from Iir. **anHman-* and *dvānmān-* ‘cloud’ < Iir. **dhvanHman-*. The second word is especially important. Insler (1975:244) proposed to read this word as **d₁nmān-*, which is impossible not only because of the full grade in neuters in *-man-* throughout Iir., but also in view of LAv. *dunman*, since the differences between GAv. and LAv. are not merely due to orthography (except for scribal errors). This means, that the LAv. word must have been pronounced differently from the GAv. word, which is possible only if we assume that GAv. *dvānmān-* is to be read */dvanman-/* (cf. LAv. *-um* < **-vam*, Morgenstierne 1973:46). *hvānmahī* and *fryānmahī* represent */hu(‘)anmahī/* and */fri(‘)anmahī/* with *-an-* from *n* in the position before *m*.

p. 32ff: For *dhāna-* ‘prize’ = *dha-na-* (*dhā*) and other words of this structure see the discussion of chapter V at the end of this article.

p. 35: *sthāla-* ‘firm ground’, *sthālā*, *sthālī* ‘id.’, *sthaṇḍila-* n. ‘ground’ < *sthā-* ‘to stand’;

p. 42: *davara(ka)-*, *doraka-* etc. ‘rope, string’ < *dā-* ‘to bind’;

p. 45: *sphaṭā-* ‘serpent’s hood’ < *sphā-* ‘to increase, grow fat’.

The etymological value of this group of words is negligible as far as IE is concerned, because all these words may be hypersanskritisms. Being possibly loan words, they were re-shaped after known Sanskrit models. For example, *sphaṭā* is a late variant of *phaṭā* and, as Mayrhofer (1963:389) remarks, is “etymologisch wohl wertlos”.

Besides, there is a possibility that in some loan words *s-* has been added in Sanskrit before initial aspirate surds, since *th-* is practically unknown in Sanskrit as word initial (Kuiper 1954:248–50). If the original meaning of

sthaṇḍila- is 'a piece of levelled ground, a barren field', cf. Pāli, Prakrit *thaṇḍila-* 'bare ground', then the connection with Proto-Munda *ḍaḍ-* 'bare, bald' (Kuiper 1948: 78, 160) is very likely.

As to the *davaraka-* family, this is a clear importation from Prakrit, but in which form it was imported, is not certain. It may be a hyper-sanskritism from Pkt. *dora-*, which would then be of non-IE origin (Kuiper 1948: 31, 131).

p. 37–8: *datta-* is a contamination of **data-* and *°tta-*;

p. 38–9: all Skt. and Av. past participles passive and gerunds with internal *-ā-* have replaced forms with short *a*.

This assumption is highly speculative. Apart from *vratā-*, for which see below, the only remnant of the "short *a* participles" Burrow could find is Pāli (!) **mata* taken from the compound adjective *anamataḡga-* (Pkt. *aṇavayagga-*), meaning 'endless' as applied to the Saṃsāra (p. 42–3). Burrow proposes to take *°mata* not, as is usual, as a past participle passive of *man-* 'to think' with the meaning of the compound 'of which the end is not thought', but of *mā-* 'to measure'.

This interpretation seems to be a rather shaky basis for such far-reaching conclusions. Besides, the reason why forms like **data-*, **stata-* etc. should have been replaced in Old Iranian by *dāta-*, *stāta-* etc. remains unclear to me. The more plausible explanation is that of Insler (1971: 573–5), who, on the grounds that the laryngeal between consonants in non-initial syllables is zero in Iranian, proposed that the participles with preverbs were the starting point for the introduction of the full grade.

As far as the roots of the shape *CReH-* are concerned, some of them could not form a zero grade (*CRH*), because it would have coincided with the zero grade of the full grade I (*CeRH*) of the root, which had a completely different meaning, at least, synchronically. That is why the only possible way to form a *ta*-participle of, e.g., the root *trā-* 'to save, protect' was *trāta-* and not **tīrta-*, because the latter would have been interpreted as a participle of the root *tar'-* 'to overcome' (cf. *na*-participle *tīrṇā-*). The verbs, which did not have a separate full grade I, formed their passive past participles analogically.

p. 44: Skt. **pati-* < IE **pā-* 'to feed' (Lat. *pāscō* etc.).

Burrow extracts this noun from a denominative verb *patiya-*, which was always held to mean 'to desire a husband' and to be derived from *pāti-* 'lord, husband', but, according to Burrow, in two passages in the *Brāhmaṇa*'s this verb should mean 'to feed' and be derived from **pati-* 'feeding'.

Both passages are etymological riddles, typical for the *Brāhmaṇa* style. I cite these passages in full just to show how shaky Burrow's constructions are.

ŚBr. 6,1,3,12 *tam abravīt: 'paśupatir asīti!' tad yad asya tan nāmākarod ośadhayas tad rūpam abhavann ośadhayo vai paśupatis tasmād yadā paśava ośadhīr labhante 'tha patīyanti.*

Eggeling (1956: 159) translates as follows: "He [Prajāpati] said to him, 'Thou art Paśupati [the lord of the cattle]'. And because he gave him that name, the plants became suchlike, for Paśupati is the plants. Hence when cattle (*paśu*) get plants, then they play the master (*patīy*)". In a footnote to the last word Eggeling writes: "As, when a horse gets much corn, it becomes spirited, 'masterful'. The St. P. dictionary 'they become strong'. It might also mean, 'they lord it (over the plants)'. However, the usual meaning 'to desire a husband' can also be taken into consideration, since it fits the context very well. But whatever meaning of *patīya-* was assumed by the author of the *Brāhmaṇa*, it is no doubt derived from *pati-* 'lord'.

The *Aitareya Āraṇyaka* passage is even less clear. Commenting on RV. 8,69,2 *pátim vo ághnyānām dhenūnām iśudhyasi* 'auf den Gatten eurer Milchkühe erhebst du Anspruch' (Geldner), it says (1,3,5): *dhenūnām iśudhyasītīm āpo vāva dhenavas tā hīdam sarvaṃ dhinvantiśudhasīti yadāha patīyasītyeva tadāha.* Keith (1909: 183–4) translates: "In *dhenūnām iśudhyasīti* the *dhenavaḥ* are the waters, for they stir all this, and by *iśudhyasi* he means 'thou art lord'". We may argue about the exact meaning of *patīya-* in this passage, but here also its connection with *pati-* 'lord' is obvious. Why it should mean 'thou art food' as translated by M. Müller, or 'you feed (nourish)' as suggested by Burrow, I fail to understand.

p. 43: *jigatnú-* 'going quickly' < *gā-* 'to go';

p. 44: *bhánati* 'to speak' < *bhā-* 'to speak';

p. 46: *prapyasá-* 'swelling out' < *pyā-* 'to swell out'.

Although Burrow presents new analyses for these words, he himself admits that the current etymologies are perfectly plausible. *jigatnú-* is mostly derived from *gam-* 'to go', *prapyasá-* from *pi-* 'to swell'. Neither does one need to see in *bhan-* a reduced grade of *bhā-* + *n*, but one can analyse these two roots as different extensions of the same root. *bheH-* : *bhen-* are correlated then in the same way as *g^eH-* : *g^eem-* 'to go' etc.

p. 43: *chaví*, *chavi-* 'skin' < *ava-chā-* 'to cut, to skin'.

This etymology seems to me very doubtful. *chavi-* is formed most probably on the basis of *chaví* and is therefore secondary (Wackernagel-Debrunner

1954: 916). A suffix *-ví*, however, does not exist, so that we have to look for an etymology that yields the suffix *-í*. Such an etymology mentions, e.g., Mayrhofer (1956: 406), connecting *chaví* with *skunáti* ‘to cover’, Gr. *skûtos*, Lat. *cutis* ‘skin’. I do not know what Burrow did not like about this etymology, but he seems to have doubted the derivation from *ava-chā*-himself, because he concludes the passage about *chavi*- with a remarkable statement: “No more satisfactory derivation for this word has been proposed, so this may be accepted...”

p. 34: GAv. *daidyāi* inf. of *dā-* ‘to give’;

p. 43: GAv. *framīmaθā* ‘you have arranged’ < *mā-* ‘to arrange’;

p. 45: Av. *kati-* ‘willing’ < *kā-* ‘to desire’;

p. 45: Av. *fravati-* ‘going out (of fire)’ < *vā-* ‘to be extinguished’;

p. 46: Av. *frasnana-* ‘bathing’ < *snā-* ‘to bathe’.

Although there are fewer cases of unetymological length of *a* than of *i* or *u* in Avestan, they still form a considerable group. Reichelt (1909: 32f) adduced some examples of short *a* instead of long in the composition: *apanəm* ‘expiration’ from *apa* + *ana-*, *frayanā* ‘ways’ from *fra* + *ayana-*. One of the certain examples is also LAV. *vayu-* ‘wind’ (cf. Skt. *vāyú-*). In the Gāthā’s there are also some occurrences of unetymological short *a*. Except for the above-mentioned cases, we find *rašnā* as Instr. sg. of *rāzarē*, *fradaθa-* ‘increase’ from *frād-* ‘to increase, further’, *spitamāi* – dat. sg. of *spitāma-* ‘the family-name of Zarathustra’, etc. Different explanations were proposed for these short *a*’s (cf., e.g., Hoffmann 1975: 265ff), varying from writing mistakes to a secondary phonetic rule (similar to the rule of unclear phonetic nature, that the long *ā* of a penultimate syllable becomes short, when this word is followed by an enclitic, e.g. *caθβārō*: *caθβarascā*). But whatever explanation may be found for this phenomenon, it must be secondary and cannot serve as evidence for PIIr. ablaut. After all, we cannot assume two infinitives in *-dyāi* from *dā-*: one with the full grade *məndāidyāi* Y.44.8b and one with the reduced grade *māncā daidyāi* Y.31.5b, *daidyāi* Y.51.20a, occurring in one idiolect!

p. 48–50: the *p*-causatives *jñapáyati*, *šrapayati*, etc. of *jñā-*, *šrā-*, etc. contain the reduced grade of the root + *p*.

There are six such causatives: *jñapáyati* ‘informs’, *snapáyati* ‘bathes, swims’, *glapayati* ‘exhausts’, *šrapayati* ‘cooks, boils’, not mentioned by Burrow: *mlapayati* ‘weakens’ and the disputed *kšapayati* ‘destroys, ruins’ (to *kšā-* or, suppletively, to *kši-*). They all occur since the AV., while the RV. uses

throughout *ā* in the *p*-causatives (also *glāpáyati*, *snāpáyati*). In the later language both forms exist side by side, those with *ā* preferably after preverbs (Renou 1975: 468).

On the grounds of these data it seems to me unfounded to draw the conclusion that the forms with short *a* should be original, in spite of the fact that it is not easy to find a pattern, according to which the forms with short *a*, when not original, could be analogically constructed. Renou (op. cit.) saw this pattern in the doublets *javālayati* : *jvalayati* 'sets on fire', thus relating these forms to the time, when Brugmann's law ceased to operate. At that time, however, another analogy could work as well. The poets of the AV. thought the short *a* causatives of roots with a final laryngeal to be very archaic (*janáyati* < **ǵonH₁-eǵ-e-ti*) and formed the *p*-causatives with short *a*.

p. 53f: some roots with internal *ā* take the reduced grade in reduplicated aorists and intensives, e.g. *sādh-*: red. aor. *siṣadhāsi*; *bādh-*: int. *bābadhe*, *badbadhé*.

This analysis can hardly be correct, because the shortening of *ā* in these forms cannot be separated from a similar shortening of other long vowels by the so-called heavy reduplication. We find reduplicated aorists *ajīvivam* from *jīv-* 'to live', *adīdipam* from *dīp-* 'to shine' (RV. *didīpas*) etc. (cf. Whitney 1889: 310) and intensives *tartarmi*, *taritṛ-* from *tṛ-* 'to pass', *carkarmi*, imper. *carkṛdhi* from *kṛ-* 'to remember', etc. The same shortening is also found in nouns from intensive stems: *carkṛti-* 'fame' as against *kṛti-*, *dīdhiti-* 'attention' as against *dhiti-* (cf. Kuiper 1961: 24f; 1978: 90f).

This disappearance of laryngeals, known also in compounds (*stīrṇa-*: *astrīta-*, etc.), is probably due to some rhythmic law, as de Saussure suggested (1922: 160, n. 1), but its nature has not been demonstrated so far.

p. 53ff: *gāhana-* 'deep, dense', *gāhvara-* 'id.', *gāhmān-* 'depth', *durgāha-* 'an impassible place, danger' < *gāh-* 'to plunge into'.

These words cannot be separated from the other members of the 'deep' family: *gāmbha-*, *gāmbhāram* 'depth', *gābhā-* 'vulva', *gābhīśāk* 'deeply down', *ga(m)bhīrā-* (Av. *jafra-*) 'deep', etc., which point to the root **ǵ^u(h)embhH-*. For *gāhana-*, etc. we should assume then the dialectal change *-bh-* > *-h-* (cf. *grabh-* : *grah-*, *kakubhá-* : *kakuhá-*, etc., Wackernagel 1896: 251).

The origin of *gāh-* is uncertain. In spite of all doubts (Mayrhofer 1956: 334f) the connection with Av. *vi-gāθ-* 'gulf', Gr. *bēssa* 'id.', OIr. *bāidim* 'to plunge' remains the most plausible, but then one must start from original **ǵ^ueH₂dh-*.

- p. 53: *vaśá* 'cow' < *vās-* 'to bellow';
 p. 54: Pkt. *ñivahai* 'to press, crush' < Skt. *vāh-* 'to press';
 p. 54f: *kaṣaṭī* 'handful' < IE **kēp-* 'to hold';
 p. 69: *ras-* 'to sound' < *rās-* 'to howl, cry' = *rā-* + *s*.

These etymologies are too uncertain to prove something. *Vaśá* was already long ago connected with Lat. *vacca* 'cow', and though the PIE form is unclear, this etymology remains by far the most plausible (Mayrhofer 1976: 169). *Ñivahai* is not necessarily a derivation from Skt. *vāh-*, which is a problem in itself. Mayrhofer (1963: 428) explains it with a question-mark as a causative of *pra-vah-* 'to set going', but the occurrences of *vāh-* are too late and too uncertain (in many texts we find *bāh-*) to allow any conclusion. *Kaṣaṭī* must be a loan, which is indicated by many doublet forms: *kavala-*, *kapala-*, *kavaḍa-*, etc., all meaning 'mouthful, handful' (for a possible Munda etymology see Kuiper 1948: 34f). As to *ras-*, I do not see any reason to assume an original long vowel: *ras-* is known since ŚBr., while *rās-* appears only in MBh., so that it seems natural to regard *rās-* as a *ṛddhi* form. The roots *rā-* (*rāyati*) and *ras-* may be cognate, but, as always with 'Schallwurzeln', the exact correspondence is difficult to establish (*reH-* : *res-*?).

- p. 55: Skt. *opaśá-* 'a kind of head-dress', Av. *pas-* 'to fetter' (*s*-aor. *ava.paśāt*, *fšābiš* 'with fetters') < IE **pāk-* 'to make fast'.

This Iir. root presents a difficult problem. Its connection with the IE root **peH₂k̂-* is indisputable, while the Iir. evidence points to a short vowel. I suppose, that here we have an old analogy. As a matter of fact, in IE there were two closely related variants of the root 'to make fast': **peH₂ĝ-* and **peH₂k̂-*, of which the former yielded a short vowel in some derivatives in Iir. (*pajrá-*, *pakṣá-*, etc., see below and Lubotsky 1981). It seems probable that the short vowel was taken over by some derivatives of the root **peH₂k̂-*.

- p. 57: Skt. *api-vat-* 'to blow upon, inspire', Av. *aipi-vat-* 'id.' < IE **vāt-* (Lat. *vātēs* 'prophet, seer', OIr. *fáith* 'seer, poet', OIc. *öðr* 'poetry', etc.).

Iir. *vat-* contains no laryngeal, as seen from Gr. *áetma*, *aetmón* (Hes.), *a-ut-mé* (Hom.) 'breath, steam', which point to **H₂uēt-*. I suppose that we must separate Iir. *vat-* from the Italo-Celto-Germanic word family. Thieme (1954: 664) derives the latter from the IE monosyllabic root noun, which explains the length of the vowel, but leaves unexplained its quality (*ā* instead of *ō* or *ē*). Recently Tichy (1980: 3f, n. 8) adduced strong arguments for the meaning 'mit etwas bekannt, vertraut sein' of Skt. *api-vat-* and connected this root with OIr., Mlr. *fethid* 'beachtet, beobachtet etc.' (referring to

Klingenschmitt). If this connection is correct, it confirms our assumption that we have two different roots here.

p. 59f: *damś-* 'to bite' contains the reduced grade of IE **dāk-* (Gr. *déksomai*, *dakēin*) + infix nasal.

damś- can be explained from IE **deH₂h-* if we assume a present **dH₂-en-h-*. This present type was quite frequent in Sanskrit, especially from roots with internal *i*, *u*, *r*, *l*: *syand-*, *śvañc-*, *śrambh*, etc. (Kuiper 1934: 95ff explained these presents as original subjunctives). Mostly the nasal of the present stem penetrated also into other stems, but sometimes the forms without nasal were preserved too. For example, for the verb *bhramś-* 'to fall, drop' post-Vedic Sanskrit knows only the ablaut *am*: *a* (< *ṛ*), but in the RV. we still find such forms as *ni-bhrāśāyan*, *bhrāś(i)ya-* and ptc. *á-ni-bhr̥ṣta-*, known also from TS., which clearly show that the nasal is not inherent in the root, but is a present formant. As the laryngeals have the function of the sonants in ablaut, we can state that *damś-* < **dH₂-en-h-* is completely parallel to *bhramś-* < **bhr-en-h-*. OHG. *zangar-* 'biting, sharp', *zanga-* 'pincers, tongs' can be explained from **dH₂-en-h-* as well.

The problem that *ḡ-* in *damś-* is not aspirated by the following laryngeal can be dismissed, if we assume that in other ablaut forms in Iir. *d* and *H* were separated. The remnants of such forms can be found in Middle Indo-Aryan words for 'fang, tusk': Pa. *dāṭhā* and Pkt. *dāḍha*, from which most of the forms in Modern IA are derived. Turner (1966: 357b) proposes for the MIA words an original form **dāmṣtra-*, but, as Burrow remarks (p. 60), it does not explain the lack of the nasal in the above forms. I think Burrow is right, when he assumes an original **dāṣtra-*, going back to IE **deH₂h-tro-*. Sanskrit has substituted the anomalous **dāṣtra-* with *damṣtrā*, having introduced the present stem.

Skt. *śamś-* 'to praise, declare, vow, etc.' can be explained as an *en*-present too. In chapter IV (p. 76ff) Burrow examines the relationship between this root and the root *śās-* 'to order, command, instruct, etc.' and shows convincingly that both roots are closely related, *śamś-* being originally the nasal present of *śās-*. Both meanings can have been developed from an original meaning 'to say or to state solemnly and authoritatively'. I agree with this analysis, but Burrow's conclusion that *śamś-* is a reduced grade of *śās-* with a nasal infix is unacceptable to me. In my opinion, *śamś-* represents **hH-en-s-* and is an *en*-present of *śās-* < **kehS-*.

The connection between Skt. *bhadrá-* 'good, kind' with Goth. *batiza* 'better', etc. was mostly seen as improbable, because, since Yāska, *bhadrá-* was seen

as related to the verb *bhand-* ‘receive praise, be favourably disposed’. We can retain both etymologies, if we analyse *bhand-* as **bhH-en-d-*. *bhadrá-* can represent either *bheHd-ro-* (see below) or *bhHnd-ro-* with secondary introduction of the present stem.

Of the roots discussed in the book under review, the same analysis may be applied also to Av. *x^vand-*, found in *x^vandra-kara-* ‘doing that which is pleasing’, and Pašto *x^vand-* ‘to taste’, if they are to be connected with the root **sueH₂d-* ‘to be sweet’ (cf. the doubts in Mayrhofer 1976: 568 n., with reference to Klingenschmitt).

It must be mentioned here, that when the formation of *en*-presents was not productive any more, *-en-* was regarded as inherent in the root, which explains presents like *dásati* (RV), etc.

p. 61f: *śas-* ‘to cut’ is a reduced grade of *śās-*.

Burrow thinks *śās-* to be original and explains the short vowel forms as having come from an old sixth class present stem **śasāti*, while in the root class the root appears with long vowel (3sg. *vi śāsti* TS., VS., 3pl. *viśāsati* ŚBr., etc.). In the RV. we find only a short vowel, and long *ā* appears in finite forms only since the *Brāhmaṇa*’s. It is therefore probable, that *ā* was introduced by analogy with other root class verbs, which frequently use *vr̥ddhi*, e.g., *stāuti*, *kṣṇāumi*, *mārṣṭi*, *yāumi*, etc. (cf. also Wackernagel 1896: 67, where he mentions the presents of the root class among the formations with usual *vr̥ddhi*). Among the other IE languages only Latin (*castrāre* ‘to castrate’) points to the laryngeal. I would suggest to reconstruct PIE **k̂H₁es-*, which not only accounts for Latin *castrāre* but also for Greek *keázō* (**k̂H₁es-* or **k̂H₁s-*) and OCS *kosá* (**k̂H₁osaH*). Initial *k̂H-* may explain the Slavic velar.

p. 62f: *yat-* ‘to strive after’: Gr. *zētēō* ‘to seek, seek for’.

Burrow divides the Skt. root *yat-* in two homonymous roots: one with the meaning ‘to put in its proper place, fix in place’ or, medial, ‘to take one’s proper place’ and found in the RV. and GAv., and another with the meaning ‘to strive after’ found only in classical Sanskrit. Burrow considers these two meaning ‘uncombinable’ and connects the second root with Gr. *zētēō* ‘to seek’.

This connection, however, can hardly be maintained, because the analysis of the meanings shows that the meaning ‘to strive after’ of the root *yat-* is secondary. In order to demonstrate how this meaning has developed from the original ‘to fix in place’ I would like to cite some of the meanings given by PW under *yātati*:

- 1) Act. in Ordnung (Reihe und Glied) bringen, anschliessen, aneinander fügen, verbinden RV. 8,35,12; 7,36,2 etc.
- 4) Med. sich verbinden, -vereinigen, zusammentreffen mit (Instr.) RV. 1,98,1; 123,12; 5,4,4, etc.
- 6) Med. sich zu vereinigen suchen mit (Loc.), zu erreichen suchen (einen Ort), zustreben, auf Etwas zuhalten RV. 10,75,3; 1,169,6; TBr., ŚBr., etc.
- 7) Med. (metrisch auch Act.) streben nach, sich bemühen um, bedacht sein auf, sich einer Sache ganz hingeben. MBh., R., Bhāg. Pur., etc.

On the grounds of this development of meaning we can, in my opinion, state with certainty that the meaning 'to strive after' is secondary for the root *yat-*, and that, therefore, the connection of this root with Gr. *zētēō*, the original meaning of which is 'to seek', is unfounded.

p. 63f: Skt. *rāsa-* 'moisture, sap; taste': Lat. *rōs, rōris* 'dew'.

The Latin word has lengthened grade and no laryngeal, which is indicated by the Balto-Slavic evidence. Russ. *rosá*, Lith. *rasà* 'dew' contain **o*, interconsonantal laryngeals yielding zero in Balto-Slavic. The theory found in older textbooks and used by Burrow throughout the book under review, that the shwa yields *a* in Baltic and *o* in Slavic is not correct. Two cases are quoted mostly in favour of it: Slavic *sporū* 'abundant, slow, fast, etc.' as corresponding to Skt. *sphirá-* < **spH₁ró-* and Slavic *stojati* 'to stand', Lith. *statyti* 'to set' < **stH₂-C-*. Sl. *sporū* was shown by Kortlandt (1980: 352) to contain a nonsyllabic prefix, which is indicated by the fixed stress and the timbre of the stressed vowel in Sln. *spòr, spóra, spóro*. This word is to be connected with Slavic *pora* 'time', which explains its divergent meanings. Slavic *stojati* and Lith. *statyti* probably have their **o* from the forms of the perfect (Kortlandt, personal communication).

p. 64: *śaknóti* 'to be able': *śákman-* 'power, help', *śākvará-* 'mighty', etc.

Since this root has no plausible IE etymology, we cannot determine whether it contains an original long vowel. To assume it only on the grounds of the long vowel in *śákman-*, *śākvará-* and some other derivatives seems unwarranted.

p. 65f: Skt. *yákṛt-* 'liver': Gr. *hēpar*, Av. *yākarə*.

That this root contains no laryngeal is shown by the Latin and Balto-Slavic evidence. Burrow tries to explain Lat. *iēcūr* through the secondary levelling of the paradigm Nom.-acc. **iēcūr*, Gen. **iacinoris*, an otherwise unknown development in Latin (besides, **iH-C-* can hardly yield *ia-C-* in

Latin). The Baltic forms Lith. *jāknos*, *āknos*, Lett. *akna* point not to the original reduced grade vowel, but to the *o*-grade, very frequent in Balto-Slavic (cf. also OPr. *iagno-* 'liver'). Lith. *jėknos*, *ėknos* contain the *e*-grade. The Slavic words for 'fish-roe, caviare' (Russ. *ikrá*, Czech. *jikra*, *jikry*, etc.) continue the zero grade of the root and point not to *i*, as supposed by Burrow, but to **jkrā-* < **jkrā-* < **ikrā-* (cf., e.g., Vaillant 1950: 140f, 178).

p. 66: *nas-* 'nose': *nās-* 'id.';

p. 67: Skt. *śaphá-* 'hoof': OIc. *höfr*, OE *hōf* 'id.'.

According to the etymology, proposed by Burrow himself (1949: 59; 1955: 196), Skt. *śaphá-* should be connected with Gr. *kóptō* 'to strike' and Russ. *kópýto* 'hoof' (< **ĭHep-*), which excludes the possibility of an original long vowel. The Germanic words probably have lengthened grade, an alternative acknowledged by Burrow on p. 68. The word for 'nose' in IE presents a serious problem: we find both **neH₂s-* (Lat. *nārēs*, *nāsus*, OP. *nāha-*, etc.) and **nH₂es-* (OHG. *nasa*, OCSl. *nosŭ*, etc.). In some languages these two stems co-exist. In Lithuanian we find *nósis* vs. *nāsāi*, in Old English *nōse/nōsa* vs. *nasu/næs(s)*, *nosu*. This word family is too unclear to serve as evidence.

p. 51: <i>pajrá-</i> 'firm'	<i>pájas</i> 'frame'
<i>pakṣá-</i> 'side'	<i>pājasyā-</i> 'flank'
<i>pañjara-</i> 'cage'	Gr. <i>pégnumi</i> 'make fast'
p. 52: <i>ślakṣṇa-</i> 'smooth'	Gr. <i>légō</i> 'leave, stop'
Lat. <i>laxus</i> 'weak'	
p. 52: <i>plakṣṇoti</i> 'strike'	Gr. <i>plégnumi</i> 'to hit'
p. 52: <i>svádati</i> 'taste, enjoy'	<i>svādate</i> 'taste, enjoy'
<i>svadáyati</i> (caus.)	<i>svādú-</i> 'sweet'
Ø-grade: <i>sūdáyati</i> 'make tasty'	Gr. <i>hédōmai</i> 'be glad'
<i>sūdāna-</i> 'putting in order'	Gr. <i>hēdús</i> 'sweet'
p. 54: <i>prahlanna-</i> 'cooling'	<i>hlādate</i> 'be refreshed'
<i>prahlatti-</i> 'id.'	
p. 55: <i>vagnú-</i> 'cry, call'	Lat. <i>vāgīre</i> 'cry, sound'
<i>vagvaná-</i> 'talkative'	Lith. <i>vógrauti</i> 'babble'
<i>vagvanú-</i> 'sound, noise'	
p. 58: <i>bhájati</i> 'to share'	<i>bhāgá-</i> 'share'
<i>bhaksy-</i> 'to eat'	Av. <i>bāga-</i> 'id.'
Gr. <i>phagēin</i> 'to eat'	OP. <i>bāji-</i> 'tribute'
p. 59: <i>rādati</i> 'gnaw, bite'	Lat. <i>rādō</i> 'scratch'
	Lat. <i>rōdō</i> 'bite'

p. 60: *śad-* 'to fall': fut. *śatsyati*, ptc. *śanna-* *śāda-* 'falling'

Lat. *cadit* 'to fall'

p. 67: *bhadrá-* 'good, kind'

Goth. *bōta-* 'advantage'

Goth. *batiza* 'better'

(for *bhādate* see above)

This evidence is Burrow's trump-card: it is no coincidence, that he mentions the root *pāj-/paj-* every time he wants to illustrate the reduced grade in Sanskrit. All attempts to explain away the correspondences are to be regarded as unsatisfactory, and this evidence would appear very convincing, if an alternative explanation were not possible.

The roots of all above-mentioned words contain a final unaspirated voiced stop, preceded by a laryngeal, and, as I have shown elsewhere (Lubotsky 1981) laryngeals were lost in Sanskrit before mediae, when the whole cluster was followed by a consonant. In the same article I considered the exceptions to this rule. Here I only mention, that the presents *śvādati*, *bhājati* and *rādati* were originally athematic, as is evident from, e.g., the Vedic forms *bhakṣi* and *ratsi*.

Chapter IV is devoted to the root pairs *śās-* : *śiṣ-*, *khād-* : *khid-* and *sādh-* : *sidh-*, which, according to Burrow, did not originally belong to one paradigm and are to be considered as different extensions. The pairs *khād-* : *khid-* and *sādh-* : *sidh-* were already regarded as non-existent by Renou (cf., e.g., 1975: 72), who also drew attention to the unusual character of the distribution of weak and strong forms of *śās-*. Burrow adduced convincing arguments to regard this pair also as two different extensions, later interpreted as belonging to one root (especially important seems to me the argument that we find in the RV. also the root *śuṣ-* with the same scale of meanings as *śās-* and *śiṣ-* have).

As far as the evidence for the reduced grade is concerned, we find very little in this chapter. *śams-* : *śās* was discussed above, while *khad-* : *khād-* may be explained by the loss of laryngeals before voiced stops.

In chapter V Burrow discusses the suffixes *-atra-*, *-ara-*, *-ati-*, *-atha-*, etc. He distinguishes two usages of these suffixes: when attached to a thematic base, they should be analysed as thematic vowel *-a-* + *-tra-*, *-ra-*, etc.; when attached to a disyllabic base, they should be analysed as the reduced grade vowel *-a-* + *-tra-*, *-ra-*, etc. With the latter case Burrow compares Gr. *genétōr*, *dámasis*, *thánatos*, *kámatos*, etc. When an athematic *aniṭ*-root takes one of these suffixes, Burrow explains it by 'secondary extension'.

The same analysis is applied by Burrow to the derivatives of the roots in

-ā: he divides *dātra-* (*dā-*), *dhāna-* (*dhā-*), *rātna-* (*rā-*), etc. into the reduced grade of the root plus the suffix (p. 9ff and chapter II passim).

The usual analysis of these forms (the zero grade of the root plus the suffix *-atra-*, *-ara-*, etc. – e.g., **dH₃-etro-* > *dātra-*) is untenable for Burrow, because, according to him, it cannot be applied to Gr. *thetós*, *dotós*, *statós*, *phátis*, *métron*, etc. Nevertheless, I believe, that such an analysis is preferable to Burrow's for the following reasons:

(1) Some of the Greek words, mentioned by Burrow, do contain a suffix, beginning with *-e-*. It concerns especially *thánatos* and *kámatos*, the most plausible reconstruction for which is **dh₁H₂-etos*, **k₁mH₂-etos* (cf., e.h., Beekes 1975: 10ff). Also Gr. *métron* 'measure, size' from IE **meH₁-*, Skt. *māti* 'to measure' can hardly be analysed *mé-tron*, because **mH₁-tro-* would probably yield **m₁H₁-tro-* > **mētron* (Beekes 1969: 183). Since *métron* cannot be an analogic formation, we must reconstruct **mH₁-etrom*, which also explains Oss. *mært* 'measure' from Old Iranian **maθra-* (cf. p. 43 of the book under review).

(2) Also in Sanskrit independent suffixes beginning with *-a-* can be demonstrated. One of such suffixes is *-atha-*, since there is no reason to consider RV. *ucátha-* 'praise, verse' as a product of 'secondary extension' of the suffix *-atha-* (*-á-* of thematic bases + *-tha-*), and RV. *ukthá-* 'id.' as an original form. I would prefer to think that the words cited by Burrow in favour of the reduced grade are such secondary extensions (*klamatha-* 'weariness', *damatha-* 'self-control', etc.), since they appear as late as Pāli, Classical Sanskrit and Buddhist Hybrid Sanskrit. Most of the examples adduced by Burrow in chapter V are actually very late and thus his attempt to connect the suffixes beginning with *-a-* and the disyllabic bases appears at least to be questionable.

(3) Although the interpretation of the suffixes beginning with *-a-* in Sanskrit in the case of thematic verbs as the thematic vowel *-a-* + the suffix is generally accepted (cf., e.g., Renou 1975: 222 (*-atu-*), 227 (*-atra-*), 231 (*-atha-*), etc.), and these suffixes were probably felt to be such by the native speakers in some period of the development of Sanskrit, I do not think it reflects the original situation. Firstly, we sometimes see, how a verbal stem has been introduced into the nominal derivative (cf. RV. *ravátha-*, and later *ruvátha-* (MS., KS.) after the present *ruvāti* 'to sound, bellow'). Secondly, the usage of the thematic vowel in nominal derivation seems to me far from self-evident. It has almost never been used even for the formation of the infinitives and participles, and in those cases, where it was used (medial participle in *-mH₁no-*, Skt. *-māna-/āna-*), we find **-o-*

and not *-e-. It would therefore seem strange that the nouns in *-tra-*, *-tha-*, etc., whose ties with the verb are much looser, do use the thematic vowel.

Thus, I conclude that PIE had two kinds of suffixes: with *-e-* and without *-e-*, existing side by side. Their distribution remains unclear.

In the final chapter Burrow considers the question of the origin of the *-i-* (*iṭ* of the Indian grammarians), which previously had been derived from shwa. It is noteworthy that Burrow changed his views since the publication of *The Sanskrit Language*. Whereas in the earlier work (p. 186-9) he thought that this *-i* went back to the nominal derivation, in the book under review he seeks its origin in the verbal conjugation and calls it a connecting vowel or an increment (whatever that may mean).

Burrow connects this *-i-* with all suffixal *i*'s in the verbal conjugation which he could find in IE languages: *i*-presents in Latin and Old Irish, *jo*-presents in Balto-Slavic, *āya*-presents in Sanskrit, *ja-* presents in Hittite, etc. All of them he derives from the 3sg. termination *-i*, found in the Hittite *hi*-conjugation of the verbs in *-ā* (e.g., *dāi* 'he places', *halzāi* 'he calls'). This termination, according to Burrow, had spread to the other members of the paradigm. In the case of *dā(i)-* 'to place' the *-i* of *dāi* (3sg.) has been introduced to *dāitti* (2sg.), *dāitteni* (2pl.) and to *dāiš* (2, 3sg. preterite). "... The *-āi-* has been subjected to conjugational ablaut, with the result that in some persons the base terminates in *-i-*, the preceding *-ā-* having been elided (*tiyanzi*, *halziyanzi*)" (p. 114). The corresponding *-i-* in the *mi*-conjugation was taken over from the *hi*-conjugation.

We may argue about the probability of such a development in general and in Hittite in particular, but one thing is certain: the 3sg. termination *-i* has nothing to do with "incremental" *i*'s in other IE languages, because it is a Hittite innovation. The Hittite *hi*-conjugation cannot be separated from the IE perfect, the reconstructed endings of which (1sg. *-H₂e*, 2sg. *-tH₂e*, 3sg. *e*) show, that Hittite has added *-i* from the *mi*-conjugation. It is confirmed also by Luwian 1sg. *-ha* and by Hittite 1sg. termination *-he* < **hai* found in the old ductus and later replaced by *-hi*, conforming to 3sg. *-i* < **ei* (cf. Kammenhuber 1969: 329ff)

Summing up, we can state that Burrow has not succeeded in demonstrating the necessity for reconstructing a reduced grade *-a-* in Sanskrit. His elaborated attempt to rescue his position on the shwa in Sanskrit has failed. This does not detract from the fact that his book is full of new and stimulating thoughts, interesting analyses and a vast body of Indo-Aryan material, rarely used by Indo-Europeanists.

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