Gr. pégnumi: Skt. pajrá- and loss of laryngeals before
mediae in Indo-Iranian

1. Some IE roots of the pattern $C(R) e H C$ - are represented in Indo-Iranian by roots containing a short medial vowel in all or some of the finite forms and derivatives. The most certain examples are the following:
1). *peH $2^{\text {g.- }}$ (Gr. pégnumi 'make fast', etc.)

RV.: pāpaje 3sg.pf. 'fall back' pájas- 'frame'
pajrá- 'firm' pājasyà- 'flank'
pakṣá- 'side, wing'
pakgin- 'winged, bird'
păkṣas- 'side'
2). *sleH ${ }_{2}$ g- (Gr. Zég ${ }^{\prime}$ 'leave, stop', Zagarós 'weak', etc.)

AV.: ślakṣṇá- < *slakṣna- 'slippery, smooth, soft'
3). *pleH 2 g- (Gr. plésso 'hit', etc.)

Br. plaksnoti 'to strike'
RV. upalapraksin- 'operating the mill-stone'
4). *sueh ${ }_{2}{ }^{d-}$ (Gr. hédomai 'be glad', hēdús 'sweet', etc.)

RV.: svádati, ${ }^{\circ} t e$ 'be sweet' suadate 'be glad, taste' svadáyati 'sweeten, season' svadú- 'sweet' sváadana- 'seasoning' prasváadas 'pleasing' svādmán- m. 'sweetness' sváadman- n. 'id.'
$\emptyset$-grade:
sam-súde 'for pleasure (inf.)' sūdáyati 'make acceptable' ?GAv. hudama- 'sweetness' súdana- 'putting in order' súuda- 'sweetness' havyasúd- 'rendering tasty (the oblations)'
5). *ghleHd-

Pān. hzanna- pp. of hचad-
Lex. prahzanna- 'cooling' prahzatti- 'id.'

RV: hláaikā 'refreshing'
ep.: hlādate 'be refreshed' hladayati 'refresh, delight'
 vógrauti 'babble')
RV: vagnú- 'cry, call, sound (of animals, dice)'
vagvaná- 'talkative, chattering'
vagvanu- 'sound, noise'
7). *bhe ${ }_{2} g-$ (Gr. phagêin, éphage 'to eat', etc.)

RV. bhâjati 'share, distribute' RV. bhāgá- 'share'
Av. bǎ̌- (pres. baxša-) 'id.' Av. bāga- 'id.'
RV. bhága- 'Dispenser, share' op. bāji-'tribute'
Av. baga- 'god'
OP. baga- 'id.'
RV. bhakti- 'distribution' vi-bhaktár- 'dispenser'
8). *reH ${ }_{2} d^{d-}$ (Lat. rādo, rodo 'scratch, bite')

RV. rádati 'gnaw, bite'
9). *ke ${ }^{H}{ }_{2}{ }^{d-1}$ (Lat. cadere 'fa11', ?Gr. kekádonto 'they gave way' $\Delta 479$, ekekedei. hupe〈ke〉khorêkei Hes.)
śad- 'to fall': AV. śatsyati, RV. ?şāda- 'grass'
S. śanna-; Br. śastada; AV., Br. ${ }^{\circ}$ ăda-

Pāṇ. śadru- 'perishing, falling'
10). *̂̂ke $\mathrm{H}_{2} \mathrm{d-}_{2}$ (Gr. Kékasmai, kekasménos/kekadménos 'excel, exceed') RV. śad- 'exce1, triumph': 'Pf. śāśadûh, Med. śāásadmahe, śāśadré, Ptc. sáásadāna-.
11). *bheHd- (Goth. batiza 'better', batista 'best', bota 'advantage', etc.)
RV. bhadrá- 'good, gracious, kind'
Av. hubaסra- 'fortunate'
12). *~~e ${ }_{2}{ }_{2} \hat{g}^{-}$(Gr. ágnumi 'crush', etc.)

RV. vájra- 'Indra's thunderbolt'
Av. varra- 'MiOra's club'
13). *ieH $2^{\tilde{g}}$ (Gr. házomai 'to honour', háaios, hagnós 'holy, pure')
RV. yájati 'to worship, offer'
Av. yazaite, OP. yadataiy 'id.'
RV: yajñáa- 'sacrifice'
yásțar-, yasṭár- 'sacrificer, worshipper'
yăjus- 'worship, sacrificial formula'
yajatá- 'adorable, holy'
Av. yazata- 'god'
$\emptyset$-grade:
RV: isțá- ptc. of yaj-
rtv-ij- 'a priest $=$ sacrificing in the proper time'
isti- 'sacrifice'
isṭăni- ' to be worshipped'
14). ${ }^{*} \mathrm{meH}_{2}{ }^{d-}$ (Gr. madăō 'to stream away'; Lat. madēre 'be, wet, drunk', etc.)
RV: mádati 'be glad, drunk' Br. mádyati 'be glad, drunk' mamátti 'id.' RV. máaana- 'delighting'

Av. mabaite 'id.'
RV: matsará- 'intoxicating'
$m a ́ d \alpha-$ 'intoxicating drink'
Av. mada- 'id.'
2. All attempts to explain away these correspondences appear to be unsatisfactory. For example, vagnü- has been connected with the root vac- 'to speak', but then we would have to assume an irregular sandhi ${ }^{1)}$. Likewise the long vowel in $s v a \bar{a} \hat{u}-$ ( Gr . $h e \bar{e} u$, Lat. suāvis, etc.) has been ascribed to the influence of the comparatives (svádiyas, sváadist tha-, Gr. hẽdion, hédistos, etc.; cf. MAYRHOFER 1976: 568f., 804), which seems hardly pos-
sible in view of the great productivity of these formations.
3. An alternative method was recently attempted by BURROW (1979), who gathered extensive evidence for Skt. $\stackrel{a}{a}$, which corresponds either to "original long vowels" in other IE languages, or to $\bar{a}$ in other formations inside Indo-Iranian which cannot be explained by verddhi. He proposes then to see this a as a reduced grade of "original long vowels". In a review of this book, however, I have shown (LUBOTSKY 1981) not only that the assumption of a reduced grade in Sanskrit is theoretically improbable, but also that the evidence provided by BURROW, when we exclude doubtful cases and cases which can be explained otherwise, turns out to be limited to the above-mentioned examples (BURROW mentions in his book 10 of the above 14 items).
4. A11 these 14 items, as matter of fact, concern roots with a final unaspirated voiced stop preceded by a laryngeal (as far as it can be determined, it is $H_{2}$, but since this laryngeal was the most common in PIE, it does not necessarily mean that the development described below, applied only to $H_{2}$ ). We may conclude that the laryngeals were lost under certain conditions before mediae in Indo-Iranian. These conditions were probably determined by the form of the cluster ${ }^{2}$. When followed by two consonants, the laryngeal was lost, followed by a single consonant it was retained.
5. The exceptions to this rule can be explained as follows: (1). The thematic presents bhájati, rádati, yájati and mádati are products of the later thematisation of original athematic presents, which is confirmed by the forms bháksi, ráatsi, yáksi, yáksva, mátsi and mátsva, used in the RV. as imperatives. Also in Avestan we find some remnants of the athematic flexion of
these verbs. In GAv. 1 sg . conj. med. yazāi should be read disyllabic ( $3 x$ ), which presented a difficult problem, because thematic stems show hiatus in these forms (MONNA 1978: 102f.). The problem disappears, when we assume an athematic stem.
(2). Of the two middles of the root ${ }^{*} s u_{2} H_{2}{ }^{d-}$, svadate was doubtless the original one, while svádate was formed after the active svádati. Since thematic middles often contrast in the RV. with athematic actives (cf. RENOU 1952: 249), it is likely, that svádati was originally athematic.
(3). The perfects pāpaje, s̄āsadúh, etc. have their short vowel either from a lost athematic present, or from the perfect forms with endings beginning with a consonant.
(4). sváadman- and svadmán-have the quantity of the vowel of the adjective, as often by the derivatives in -man- (WACKER-NAGEL-DEBRUNNER 1954: 754).
(5). The present mádyati may indicate that the laryngeals were retained before mediae plus $y$, but the late attestation of this present and the lack of other examples do not allow to draw any conclusion.
(6). Other exceptions are due to the introduction of the verbal stem into the derivatives.
6. The loss of laryngeals before unaspirated voiced stops in IIr. provides further immediate comparative evidence for the theory of GAMKRELIDZE and IVANOV (1973), that the PIE voiced stops were actually glottalic, or, more precisely, pre-glottalic, as was demonstrated by KORTLANDT (1978) on the grounds of different reflexes of the mediae in the separate languages (the glottalic articulation of the vowel before mediae in Latvian, Winter's law in Balto-Slavic accentuation, Lachmann's law in Latin, Bartholomae's law in IndoIranian, glottalic consonants in Sindhi and Armenian). In

Indo-Iranian, where the three laryngeals merged into a glottal stop, the PIE clusters of laryngeals with mediae became $-P^{\prime} t-,-P^{P} \hat{k}-,-P^{2} k-$ and $-P^{2} k \stackrel{u}{n}-$, which led to the loss of the glottal stop, when this cluster was followed by a consonant.

## Notes:

1) WACKERNAGEL 1896: 117 mentions only three examples of this irregular sandhi: besides vagnú- also ŝagmá- 'strong' : sak- 'to be able' and vagovin-'eloquent': vāc- 'speech'. The connection of sagmá- with śak- is often disputed (cf., e.g., MAYRHOFER 1976: 289). I suppose then that this sandhi was usual with some suffixes, attached directly to root nouns, for instance, $v i n-$ and -vant- (cf. Ait.Br. vagvant-, WACKERNAGEL-DEBRUNNER 1954: 891).
2) I am indebted to Prof. dr. F. H. H. KORTLANDT for this suggestion.

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