

## Vedic *nakhá-* and devoicing by laryngeal.

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§1. *nakhá-* and the words for ‘nail; claw, talon, hoof’. - §2. Aspiration by laryngeal and Kümmel’s devoicing by laryngeal rule in Iranian. - §3. Two old “Greco-Aryan” cruxes: *makhá-*, *math<sup>h</sup>-*, §4. *?granth<sup>h</sup>-*, *?kha-*. - §5. Phonetic interpretation.

### 1. *nakhá-* and the words for ‘nail; claw, talon, hoof’.

1.1. The well-known inherited word for ‘(finger-, toe-)nail; claw, talon, hoof’ et sim., with cognates in every branch but Albanian (with lexical replacement >> *thua/thue* < AK *?\*h<sub>2</sub>k<sup>h</sup>ón*).

For the range of meanings, cf., e.g., Akkadian *šupru* ‘nail; claw, talon, hoof’, Sum. *um b in* ‘nail; claw, talon, hoof’ (probably a semantic universal).

Advances in our understanding of PIE phonology and morphology have reduced the chaotic situation presented in older handbooks considerably, but several oddities remain, including the voiceless aspirate of the Vedic form.

### 1.2. Survey.

1.2.a. A **root noun** *\*h<sub>3</sub>nog<sup>wh</sup>-* / *\*h<sub>3</sub>neg<sup>wh</sup>-* can be set up on the basis of Greek, Tocharian, and Luwian, and probably also Armenian.

1.2.a.a. Greek (Myc., Hom. +) *?o-nu(-ke, -ka)*, ὄνυξ ‘1. talon, claw; 2. nail (of a person)’.

- ‘talon of a bird’ the only meaning in Homer and Hesiod: e.g. *Il.* 8.247-8 αὐτίκα δ’ αἰετὸν ἦκε τελειότατον πετεηνῶν, / νεβρὸν ἔχοντ’ ὄνυχεςσι τέκος ἐλάφοιο ταχείης (further 12.202, 220, *Od.* 2.153, 15.161, Hes. *Op.* 204, 205). Meaning ‘hoof’ implied by archaic cpd. μώνυχες (-ας) ἵπποι (-ους). Later hex. and Attic prose (+) ‘nail’ (of a person).

- The inclusion of the Myc. *o-nu(-ke, -ka)* here is quite uncertain: see *DMic.* II 28f. for details.

For the raising of *\*o > u* see of course Cowgill 1960, Vine 1999. Lack of “Saussure effect” explained by paradigmatic levelling, i.e. restoration of the initial on the basis of the weak stem *\*h<sub>3</sub>n(e)g<sup>wh</sup>-*.

1.2.a.β. Tocharian A *meku*, B *mekwa* pl. tant. ‘finger-nails (of a person)’.

TA: A 321 a2 /// *yetusām kapśāñi • tsres maku āñkarāsyo* ‘the body adorned [with 80 secondary characteristics], sharp nails (and) incisors’ (trans. adapted from Adrian Musitz apud CEToM).

Buddha-nails are usually described as prominent (*tuñga-*), copper-coloured (*tāmra-*), and glossy (*snigdha-*), cf. Mahāvāstu 2. 43 *buddhānām bhagavatām asīty anuvyañjanāni āsi // buddhānām bhagavatām tuñganakhā tāmranakhā snigdhanakhā*, and esp. 2.306 *tuñganakhā tāmranakhāḥ kailāsaśikharopamāḥ / lakṣaṇair utsadaiś caiśām kāyam atīva śobhitam*, Lalitavistara p.76 *katamāni ca mahārāja tānyaśītyanuvyañjanāni? tadyathā - tuñganakhaśca mahārāja sarvārthasiddhaḥ kumāraḥ / tāmranakhaśca snigdhanakhaśca* etc.

TB: B 74 a6 /// *ts· , praroñ māka , lalaṃṣkane , lyelyūkwa ṣaṇ , mekwasa* (= verse 18c) ‘his fingers, very soft, illuminated by his own nails’.

For the luminosity of finger- or toe-nails, a stock theme in kāvyā, cf., e.g., Aśvaghōṣa *Buddhacaritam* 4.47 (*nakhaprabhayā*), Saund. 4.17, Kālidāsa *Kumārasaṃbhava* 1.33 (*abhyunnatāṅguṣṭhanakhaprabhābhir nikṣepañād rāgam ivodgirantau / ājhratus taccaraṇau pṛthivyām sthālāravindaśriyam avyavasthām*), *Raghuvamśa* 2.31 (*nakhaprabhābhūṣitakaṅkapattre*), etc., etc.

Pace Adams (DTB<sup>2</sup> s.v. *mekwa*), TB *kw* cannot be a direct reflex of the labiovelar; instead *\*h<sub>3</sub>nog<sup>wh</sup>-s > \*moks* [n.b. with apparently irregular *m-*] > *mek* (exactly as TB *ek* : TA *ak* < *\*oks* < *\*h<sub>3</sub>ok<sup>wh</sup>s*), with secondary transfer to plural class I.2 B *-wa*, A *-u*). N.b., this is not necessarily evidence for a u-stem!

For the apparent sporadic development  $*n...K^w > *m...K^w$  cf. some by-forms of ‘naked’: YAv. *maṅna-* ‘naked’, as if  $< *mog^wnó-$ , dissimilated further in Khot. *būnaa-*  $< *baṅnaka-$ , and the even stranger Greek γυμνός, for which a parallel  $*mog^wnó-$  seems to be necessary (cf. Cowgill 1960:156f.) and hence either  $*mog^wnó- >> *g^womnó- > gumnó-$  (by Cowgill’s Law) or first  $*mog^wnó- > *mugnó-$  (by Cowgill)  $>> gumnó-$ . Cf. further Cl.Arm. *merk* ‘naked’  $< *meg^w-ro-$  uel sim.

1.2.a.γ. CLuw. *tammūga* ‘nail-(clippings)’ (per Hart 2004):  $*sh_3eng^{wh}- > *Temg^w-$  [with *-m-* by “assimilation” (?) and preservation of  $g^w$  after nasal]  $> *Témug-$  (metathesis / epenthetic [o<sup>?</sup>] vowel?)  $>$  (Čop) *tammūg-*.

The meaning is reasonably certain at KUB 32.8+ iii 16ff. (per Starke’s interpretation):

iš-ša-ra<aš-ša>-an-za=ti-i=t-ta | pa-a-ta-aš-ša-an-za ta-am-mu-u-ga la-a-at-ta | za-an-da du-ú-pa-im-mi-in iš-ša-ri-in | za-an-da du-ú-pa-im-mi-in EME-in

‘(s)he has taken away the nails of his/her hands and feet; the afflicted (*zanta dupa(i)-*) hand, the afflicted tongue’

Suggest that *tammūga* represents a collective plural to the root noun set up on the basis of Greek and Tocharian. The Schwebeablaut  $*sh_3eng^{wh}-$  can be motivated in two ways:

- phonological: the addition of the “s-mobile” triggers a resyllabification:  $*sh_3neg^{wh}- > *sh_3eng^{wh}-$ . This would be the “mirror-image” of the development seen in (e.g.)  $*h_2eug- \rightarrow *h_2uog-s-$  (: OHG *wahsan*) /  $*h_2ueg-s-$  (: Gk ἀέξω).
- morphological: the coll. pl. was made in **two** derivational steps: (i) to weak stem ( $*sh_3neg^{wh}- >>$ )  $*sh_3ng^{wh}- \rightarrow$  vr̥ddhi  $*sh_3éng^{wh}-o- \rightarrow$  coll.pl.  $*sh_3éng^{wh}eh_2$ . Cf. Nussbaum 2014 and 2018.

The *-m-* of the CLuw. is in need of further clarification. Could it have arisen via the development seen in Tocharian? A bolder hypothesis would start with a  $*h_3meg^{wh}- / *(s-)h_3emg^{wh}-$ . (For the root shape cf.  $*temk-$  and  $*h_2emg^{wh}-$ .) Toch. would then reflect the *\*m-* directly (as would Arm. *magil* ‘claw’). The *\*n* of the nuclear branches could have spread from the variant with regular assimilation in the Schwebeablauting context ( $*h_3emg^{wh}- > *h_3eng^{wh}-$ ). But this is probably too far-fetched.

?1.2.a.δ. Armenian *ehungn* ‘nail’ (plus (somehow) *magil* ‘claw’). *ehungn* inflects as an n-stem on the model of other anatomical terms, cf. *akn* ‘eye’ and *otn* ‘foot’. Would probably have expected *\*anungn*. Various attempts to explain the initial by dissimilation (cf. Gk λυμνός: γυμνός  $< *numno- < *nog^wno-$ , Saussure 1922:109 n.1) and tinkering with the prothetic vowel.

The prehistory of *magil* ‘claw’ is quite obscure, but it is notable for the initial *m-*, either by dissimilation  $*n...K^w > *m...K^w$ , or (less likely) as a relic of the original Anlaut  $*h_3m-^o$ . Cf. Olsen 1995:453.

?1.2.a.ε Lat. (glossarial) *unx*? Probably a ghost-word.

1.2.b. An **i-stem** can be set up on the basis of Latin and Hittite, and possibly reflected in Celtic as well.

1.2.b.α. Latin *unguis* (Pl., Cato +) ‘(finger-, toe-)nail; claw, talon’. Non-human anatomical reading renewed by *ungula* ‘claw, talon, hoof’ (Pl., Enn.+).

1.2.b.β. Hittite *šankuyai-* (OH+) nom sg. *ša-an-ku-wa-a-iš*, sum. UMBIN ‘1. fingernail, toenail; 2. unit of measurement’  $< AK *sh_3ng^{wh}ó-$  (Weitenberg 1979 and CHD s.v.).

To be seen in conjunction with other i-stem anatomical designations: see esp. Hitt. *haštai-* ‘bone’ besides the root noun continued by CLuw. *hāš-*, Lat. *os(s)*.

1.2.b.γ. Celtic: Old Irish *ingen* (f. *ā*) ‘1. fingernail, toenail; 2. hoof, claw, talon’, Brittonic forms reflecting  $*ang^wīnā$ : OW *eguin*, M/ModW *ewin* ‘fingernail, toenail; 2. hoof, claw, talon’, etc.

Suggest i-stem derivational basis PIE  $*h_3ng^{wh}i- > PC *ang^wi-$  ‘nail’  $\rightarrow *ang^wīno-$  ‘made of nail’, substantivised f.  $*ang^wīnā-$  ‘nail (etc.)’, with Dybo shortening of the vowel in OIr. However, Italic at least

suggests \*-īno- had taken on a life of its own as a suffix to a number of different stem types. Hence i-stem basis is not assured.

The replacement of the basic noun with its own substantivised genitival derivative is a constant phenomenon in Indo-European anatomical terminology. To be thought of as a *cycle* (in the sense of the “Jespersen cycle” in negations), whereby anatomical terminology is constantly renewed; this e.g. \**k̑erd-* / *k̑rd-* → \**k̑rd-ȋo-* → καρδίᾱ; \**h<sub>2</sub>ost-* → \**h<sub>2</sub>ost-ejo-* → ὀστέον, and so on. (For the derivational morphology involved in genitivals global ref. is made to Nussbaum 2009.)

1.2.c. A **thematic** stem is attested in Balto-Slavic: \**h<sub>3</sub>nog<sup>wh</sup>ó-* > Lith. *nāgas* (4), Latv. *nags* ‘(finger-, toe-)nail, claw, hoof’; specialised in the meaning ‘stone’ in the determinative cpd. Lith. *tītnagas* ‘flint’ (see Petit 2007); \**h<sub>3</sub>nog<sup>wh</sup>éh<sub>2</sub>* > Lith. *nagà* ‘id.’ (4), PSl. *nogà* ‘foot’.

Latvian has what looks like a “genus alternans” in m.sg. *nags* ‘nail, claw, hoof’, f.pl. *nagas* ‘(both) hands; hands and feet’ (besides regular pl. *nagi* ‘nails, claws, etc.’). This suggests starting with a collective pl. \**h<sub>3</sub>nog<sup>wh</sup>éh<sub>2</sub>*, whose (backformed) singulative n.sg. \**h<sub>3</sub>nog<sup>wh</sup>óm* was remade as a masc. within Baltic, and otherwise gave the feminine stem common to both Baltic and Slavic. (Semantics of this bifurcation need further discussion, but cannot engage in this now).

OPr. *nagutis* ‘nail’, OCS (+) *nogъtb* ‘id.’ not necessarily evidence for a u-stem, the suffix \*-uti- mildly productive: cf. ALEW s.v. *nāgas*:

Das Suffix dieser Bildung und ihrer slav. Entsprechungen um aksl. *nogъtb* sm. ‘Nagel’ findet man speziell bei Bezeichnungen für Körperteile auch in aksl. *lakъtb* g.sg. -*kte*, russ. *lókot*’ g.sg. -*ktja* sm. ‘Ellbogen’, dessen Derivationsbasis in lett. *ēlks*, *ēlka* sm. ‘Ellbogen’ vorliegt. Dazu allgemein Vaillant 2,1.224, 4.699f.

1.2.d. A genitival derivative stem in \*-lo- is reflected in the Germanic designations for ‘nail’, and also indirectly in Indo-Iranian.

1.2.d.a. For Germanic, \**naglaz* is suggested by OE *næg(e)l*, OHG, OS *nagal* (etc.). ON *nagl*, pl. *negl* by contrast inflects as a consonant stem. Most likely secondary transfer to athematic inflection on the model of ‘foot’. Thus set up originally genitival \**h<sub>3</sub>nog<sup>wh</sup>-* → \**h<sub>3</sub>nog<sup>wh</sup>-lo-* ‘made of nail’ (with o-grade of the strong stem copied), hence substantivised according to the derivational cycle discussed above. For genitival \*-lo- see esp. the pronominal genitive type Hitt. *kēl* < \**ke-lo-* etc. (per Rieken 2008). For loss of the labial element before the following consonant cf. Lass 1994:20-1.

1.2.d.β. A parallel formation probably underlies Ved. (VS +) *áṅghri-* ‘foot; root (of a tree)’. Here start from \**h<sub>3</sub>ṅg<sup>wh</sup>-ló-* ‘made of nail’ > ‘nail, claw, etc.’ → vṛddhi \**h<sub>3</sub>éng<sup>wh</sup>-li-*, with the cycle repeated again.

1.2.e. Indo-Iranian reflexes.

1.2.e.a. Iir. consistently display what appears to be a voiceless aspirate: Ved. *nakhá-*, Middle Indic *nakha-*, (further forms Turner 6915, 6916); Ir. MP, NP *nāxun*, Bal. *nākun*, Khot. *nāhune* (pl. tant.), Sogd. *n’xn*, *n’yn*; Oss. *nix*, *nyx*; but voiced stop in Talysh *nangɣɪr*, Wāxī *diǰár/digár*.

Kümmel (2018, 2021, and elsewhere) has convincingly explained the Iranian forms as devoicing by \**h<sub>2</sub>* (the cases of \**h<sub>1</sub>* are less certain), see such cases as:

- ‘big’: \**meǵoh<sub>2</sub>*, weak stem \**m(e)ǵh<sub>2</sub>-* > \**majaH* ~ \**majH-* > YAv. *mazā-* ~ *mas-*, OP \**madā-* ~ *maǵ-* (cf. further comp. *masiiah-*, Sogd., Khw. and MParth. *ms* ‘further, furthermore’, superl. *masišta-* etc.)
- ‘navel’: PIE \**h<sub>3</sub>nob<sup>h</sup>-(i)-* (Ved. *nābhi-* f.): YAv. *nāfa-* ‘navel, origin, family’: found in both West Iranian (MP *nāfag*, NP *nāfa*; Parth. *nāf* ‘family’, MP *nāf*) and in East (better perhaps “peripheral”) Ir., thus Ossetic *na(f)æ*, Sogdian *nāf* ‘people, tribe, nation’, Khotanese \**nāha-* ‘navel’ (reconstructed on the basis of late Khot. locative forms *nehä* = *nābhau*, *lte-ba*, etc.), and similar in modern Pamir languages. “Expected” -*b-* shows us in the cpd. YAv. *nabānazdišta-* ‘closely

related' ("navel-nearest"), exactly as Vedic *nābhānediṣṭha*, a personal name obviously built to the same compound (RV 10.61.18).

Suggests (e.g.) *\*nab<sup>h</sup>-aH-* (: *nabānazdiṣṭa*) beside vṛddhi-derivative *\*nāb<sup>h</sup>-H-a-* (i.e., phon. [na:b<sup>h</sup>χa-]) > *\*nāp<sup>h</sup>Ha-* > *nāfa-*.

- 'cold, ice': YAv. *isu-*, Pashto *asəy* 'hoar frost' (< *\*isukī* or the like) besides Wāxī *yaz* 'glacier (Sarikoli *yoz* 'id.') < Proto-Ir. *\*yājaH*, coll.pl. to the archaic PIE *\*jeǵo-* > Hitt. *eka-* 'ice', *\*jeǵi-* > OIr. *aig*, gen. *ego*, MW *ia*, Gmc *\*ieka(n)-* > ON *jaki* 'icicle', etc. (Add here Lith. *ižà* 'ice-floe', *ižas* 'id.' (usually connected with *aiža* 'fissure' (et al.), but (i) an ice floe is not the same thing as a crack in the ice, and (ii) the short *i* of the words for 'ice floe' is unexplained on the usual view).) Thus derive YAv. *isu-* < *\*ijH-u-* (for secondary u-stem, cf. Hitt. *miliddu-* 'sweet, honeyed', derived from *milit(t)-* 'honey', cf. Gk μῆλι, etc.).

1.2.e.β. For the main group of Iranian forms, start with vṛddhi *\*h<sub>3</sub>nōg<sup>wh</sup>-h<sub>2</sub>-o-* → nominalising u-stem *\*h<sub>3</sub>nōg<sup>wh</sup>-h<sub>2</sub>-u-* 'naily thing' = 'nail' > *\*(γ)na:g<sup>h</sup>χu-* > *\*nāk<sup>h</sup>Hu-* with Kümmel devoicing > *\*nāxHu-* 'nail' → *\*nāxHu-na-* (: Ved. *śmāsru-* 'beard' : *śmāsruṇá-* 'bärtig', *dāru-* wood : *dāruṇá-* 'hard' (sc. hard as wood)) 'made of nail' > 'nail' (with repetition of the by-now-familiar cycle) > MP, NP *nāxun*, Bal. *nākun*, Khot. *nāhune* (pl. tant., in typical lists of body parts), Sogd. *n'xn*, *n'yn*.

N.b. the long-vowel of these forms cannot be *\*o* > *ā* via Brugmann, since the laryngeal closes the syllable.

For the u-stem (without vṛddhi) and associated adj., compare perhaps Dameli (a Dardic lang. of Chitral, N. Pakistan) *nawur* < *\*nakhura-* (← *\*nakhu-*).

Ossetic *nix*, *nyx* stands apart, and probably continues a thematic stem *\*naxa-* < *\*naxHa-* (as Vedic, see below).

Talysh *nanǵyr*, Wāxī *diǵər/digər* appear (uniquely within Iranian) to continue the "expected" voiced asp., e.g. PIIr. *\*nag<sup>h</sup>u-ra-*.

1.2.e.γ. For Vedic *nakhá-* then set up *\*h<sub>3</sub>nog<sup>wh</sup>-h<sub>2</sub>-ó-*. This will be a genetival derivative to the collective encountered above in Luvian and Balto-Slavic and, indirectly, in Iranian.

The question immediately arises: could the Vedic voiceless aspirate be explained in Iranian style, as the lautgesetzlich continuation of the cluster *\*-g<sup>wh</sup>h<sub>2</sub>-* (phonetically [-g<sup>wh</sup>χ-] ~ [-g<sup>wh</sup>h-])?

## 2. Aspiration and devoicing by laryngeal in Indo-Iranian.

2.1. *\*T + h<sub>2</sub>* > PIIr. *\*T<sup>h</sup>*. The well known rule first formulated by Saussure for *th* ('Contribution à l'histoire des aspirées sourdes', *BSL* 7 (1892) 118) and extended to *kh* and *ph* by Pedersen and Kuryłowicz:

Paradebeispiel 'path': AK *\*péntoh<sub>2</sub>-s*, gen. *\*pñth<sub>2</sub>és* > PIIr. nom. *\*pántaHs* ~ gen. *\*pñt<sup>h</sup>Hás* > Avestan *pañtā̎*, *paθō̎*, Ved. *pánthāḥ*, *patháḥ* (n.b. with levelling of *\*t<sup>h</sup> ~ t >> th*). [*\*h<sub>2</sub>* ex hypothesi, n.b.]

2.2.a. *\*D + h<sub>2</sub>* > IA *D<sup>h</sup>*. The parallel rule first formulated by Cuny ('Indo-européen et sémitique', *Revue de phonétique* 2 (1912) 101sqq.):

Paradebeispiel 'big': *\*meǵh<sub>2</sub>-* > PIIr. *\*maj<sup>h</sup>H-* > Ved. *máhi* (for *\*h<sub>2</sub>* cf. Gk μέγα; Hitt. *mekki* with geminate; etc.).

2.2.b. Kümmel's Iranian devoicing rule (discussed above) - differential treatment of *\*h<sub>2</sub>* in Iranian:

Paradebeispiel 'big': *\*meǵoh<sub>2</sub>*, weak stem *\*m(e)ǵh<sub>2</sub>-* > *\*majaH* ~ *\*majH-* > YAv. *mazā-* ~ *mas-*, etc.

2.3. *\*D<sup>h</sup> + h<sub>2</sub>* > PIA *T<sup>h</sup>?*

A few preliminary points:

2.3.a. Since the laryngeal effects surveyed above have generally been conceived of as “aspiration by laryngeal”, obvious assumption is that nothing would happen in the case of  $*D^h + h_2$  since there is *already* aspiration. Hence, no one seems to have considered the question of **what actually happened** in such cases.

2.3.b. Note that there are only **2** roots in  $*-D^h h_2$  in LIV<sup>2</sup> ( $*b^h ed^h h_2$ -: Hitt. *padda*-, Lat. *fodio*, etc. (where the  $*h_2$  is set up to explain the Hittite geminate), with no Ilr. cognates, and  $*d^h eg^{wh} h_2$ -, where the Vedic reflexes are anī (further discussion below)), beside **16** in  $*Th_2$  (and **4** in  $*-Dh_2$ -). I am **not** hereby suggesting that a change of  $*D^h h_2 > *T^h h_2$ - was already PIE; rather, the asymmetry may be a result of the fact that roots reconstructed in final  $*-Th_2$  are in some cases done so on the basis of precisely Indo-Aryan, and it may be that **some** of these reflect instead  $*D^h h_2 > *T^h h_2$ .

2.3.c. A particular advantage of the latter scenario would be to provide a rationale for certain cases of Ved.  $Th : Gk T^h$ . No laryngeal aspiration will be necessary in the case of Greek if these can be seen to continue  $*D^h h_2$  sequences, since  $D^h$  obviously yields Greek  $T^h$  directly (regardless of the following laryngeal).

### 3. Two old “Greco-Aryan” cruxes.

§3.1. Ved. *makhá*- and derivatives: Gk μάχομαι et al. ‘race, vie, contend, fight’ - §3.2. Ved. *mathí*- ‘steal’: Gk *Promētheus*, *Promātheus*.

Hence begin our survey of potential parallels with **two** such cases:

#### 3.1. Ved. *makhá*- and derivatives: Gk μάχομαι et al.

3.1.a. The Vedic adj. *makhá*- appears to mean both ‘generous, freigebig’ and ‘warrior, Kämpfer’. For the former an inner-Vedic connection with *maghá*- n. ‘Gabe, Geschenk, Lohn, Reichtum’ seems desirable (cf. AiGr I<sup>2</sup> Nachträge 69), whereas the latter obviously points to Gk μάχομαι (and has since the 19<sup>th</sup> c.: e.g. Grassmann Wb s.v. *makhá*- “von einer Wurzel \*makh (gr. μάχομαι), welche mit mah, mamh nichts gemein hat”). Our tentative sound law facilitates the inner-Vedic connection whilst also allowing the possibility of reconciling **both** etymological connections (to be further explored below). In nuce, suggest a conflation of:

- To PIIr.  $*mag^h$ - ‘give (uel sim.)’ (PIE form not entirely clear, cf. Hitt. *maškan*- ‘Gabe, Bestechung, Sühnegabe’ if < virtual  $*mag-sk$ -): n.  $*mag^hám$  Gabe, coll.pl.  $mag^h áH \rightarrow *mag^h H-á$  ‘freigebig’ >  $*mak^h Há$ - >  $*makhá$ -;
- To PIE  $*meg^h h_2$ - ‘run, vie with, fight’ (Gk μάχομαι, Toch. B *mākā*-) simply suggest  $*mog^h h_2 ó$ - ‘runner, fighter’ >  $*mag^h H-á$ - >  $*mak^h Há$ - >  $*makhá$ -.

3.1.b. This hypothesis needs to be tested against the Vedic material. A full survey is impossible here, but see esp. several passages in which **both** senses seem to be operative:

α) 1.119.3 sám yán mitháḥ pasṛdḥānāso ágmata , śubhé makhá ámitā jāyávo ráṇe / yuvór áha pravaṇe cekite rátho , yád aśvinā váhathaḥ sūrím á váram

Geldner: Als im gegenseitigen Wettstreit **die reichen Herren** um zu prunken in unermeßlicher Zahl zusammengekommen waren, die im Kampfe siegreichen, da tat sich euer Wagen in rascher Fahrt hervor, da ihr Aśvin die Herrin nach Wunsch fahret.

Jamison-Brereton: When, contending with each other, they have clashed with one another for beauty - (those) innumerable **combatants**, victorious in battle - then your chariot appears ever brighter in its steep descent, when you convey the patron according to his fill, Aśvins.

Likewise Elizarenkova has бесчисленные соперники ‘innumerable combatants, rivals’ for *makhá ámitā*.

Renou EVP 16 (1967), 20: ici *makhá*- est clairement «combattant»; tout au plus supposera-t-on un double sens (+ «genereux»), comme dans *ráṇa*- qui suit («combat» + «manifestation de joie»).

The śleṣa only works if there are two distinct senses: here primary ‘fighter, combattant’, secondary ‘generous, genereux’.

Likewise verbal stem *makhasy-* :

β) 9.61.27 ná tvā śatām caná hrúto , rādho dítsantam á minan , yát punāno makhasyáse

Renou : ‘Même cent fourberies ne sauraient te perdre, (quand) tu cherches à donner un bienfait, / vu qu'en te clarifiant, tu te-montres-généreux’ ; but EVP 8, 91 (comm. ad loc.): “le contexte inviterait plutôt au sens de «combattre», mais cf. [9.]50, 2 ([9.]20, 7) ci-dessus ; peut-être *superposition sémantique* [my italics]”.

J-B follow this up: A hundred crooks [/wool tufts] will never confound you when you are eager to give largesse, / when you, becoming purified, do battle [/act bounteously].

γ) 9.101.5 índur índrāya pavate , íti devāso abruvan / vācās pátir makhasyate , vísvasyésāna ójasā

Renou: Le suc-de-soma se clarifie pour Indra, ainsi ont dit les dieux./ Maître de la parole, il se sent-valeureux, lui qui commande tout par sa force-formidable.

J-B: “The drop purifies himself for Indra”, so the gods said. / The lord of speech does battle [/ seeks bounties], holding sway over all with his strength.

Geldner as usual operates with only the ‘bounteous’ meaning (‘Der Meister der Rede zeigt sich als Freigebigere’).

δ) 10.11.6 *svapasyáte makhás* : généreux, il s'active à l'œuvre (Renou): der Freigebigere(?) verrichtet gutes Werk (Geldner), прекрасно действует щедрый (Elizarenkova); EVP 14, 71 (comm. ad loc.): “*makhá-* «généreux» ...Agni est *svápas* en tant qu’il fait des largesses, 9,66,21”; J-B “the bounteous one [= Agni?] is performing his work well”.

I would suggest that we have a *śleṣa* here too: ‘bounteous’ (of Agni) / ‘combatant’ (of Soma, cf. 9.61.27 above).

Cf. Jamison comm. ad 10.11.6: “As noted in the publ. intro., this last vs. of the Jagatī hymn is esp. crammed with matter and subject to simultaneous and overlapping readings. As Re points out, the vs. contains 7 finite verbs, of which 6 are pres. indic. (only the first is exceptional, the impv. *īraya*). For none of them is the subject identified (save for epithets or descriptors). Suggestions for the identities of the subjects vary widely; I will not list them all, but give what I consider the primary referents in each case – but as indicated in the publ. intro., the studied vagueness as to identity is **surely meant to invite the audience to interpr. each statement as applicable to both Agni and Soma (or vice versa).**”

ε) In many passages only the ‘generous’ meaning is applicable, e.g. *adurmakha-* (8.75.14) evidently ‘not without gifts’: non exempt de générosité (Renou EVP 13 80, comm. 157), nichtkarg (Geldner), не-скупец (Elizarenkova), no stingy patron (J-B).

[N.b. For the moment I leave open the possibility that the Gk family of words may also in some instances continue the etymon of Ved. *maghá-*, as suggested (with different details, of course) by M. Janda, *Purpurnes Meer: Sprache und Kultur der homerischen Welt*. (Innsbrucker Beiträge zur Kulturwissenschaft. Neue Folge, Band 7), Innsbruck 2014 - ch. 15]

3.2. Ved. *math<sup>i</sup>-* ‘steal’: Gk *Promē<sup>h</sup>ēus*, *Promā<sup>h</sup>ēus*.

Famous connection made by A. Kuhn, *KZ* 4 (1855), 124, and again *Die Herabkunft des Feuers und des Göttertranks* (2nd ed. Gütersloh 1886), 18f.

For the details regarding the stem *math<sup>i</sup>-* (to be separated from *manth<sup>i</sup>-* ‘churn’) see Narten 1960 [= 1995:11-25]. Last footnote of the article (1960:135[=1995:25] n40) Narten accepts with some reserve Kuhn’s connection.

Hence set up the root as \**mad<sup>h</sup>h<sub>2</sub>-* (> \**mad<sup>h</sup>H-* > \**mat<sup>h</sup>H-* > *math<sup>i</sup>-*) and operate with a lengthened grade in \**-mā<sup>h</sup>h<sub>2</sub>-* > Gk *-mā<sup>h</sup>-* ~ *mē<sup>h</sup>-*.

4. Other possible parallels: ?*granth<sup>i</sup>-*, ?*kha-*

4.1. Ved. *granthi-* : i-stem in *granthi-* ‘knot’, them. stem in Khot. *grantha-* ‘id.’, MParth. *gryh* ‘id.’, MP *gryh* ‘id’ (cf. also MParth. *gryhcg* ‘small joint, chain, joint of a chain’, MP *grecg* ‘joint’): Gk γρόνθος (attested late: 1<sup>st</sup> CE +) ‘fist’.

Chantraine:

**poing » subsiste en grec moderne.**

**Et.: Les données philologiques font croire qu'il s'agit d'un terme récent qui a concurrencé πῶξ et l'a évincé. Si l'on pense qu'il ne s'agit pas d'une création récente, mais d'un vieux mot populaire qui n'est attesté que par l'effet du hasard, après l'ère chrétienne, il est licite d'en chercher une étymologie par la grammaire comparée. On a supposé un suffixe -θος (cf. βρόχθος, etc.) et rapproché le vieux norrois *krumma* f. « main », v.h.a. *krimma* « serrer » et plus loin lat. *gremium*. Tout cela reste en l'air**

Suggest nominal formations *\*grond<sup>h</sup>h<sub>2</sub>i-* *\*grond<sup>h</sup>h<sub>2</sub>o-*. Allows an exact equation with Lithuanian *grandis* ‘ring, armband, joint of a chain’, OPr. *\*grandis* ‘Rincke’ ‘Grindelring am Pflug’ and similar.

[The Germanic words sometimes adduced in this context (e.g. NHG Kranz) appear to continue *\*-d-*, which might suggest a different root; I omit further discussion.]

4.2. Ved. *kha-* n. ‘hole, canal’ : root *\*g<sup>h</sup>eh<sub>2</sub>-* ‘open, gape, yawn’ (vs. usual connection with *khan<sup>i</sup>-* ‘dig’). BSl. demand a palatal velar here, but perhaps this is not insurmountable.

RN *\*g<sup>h</sup>eh<sub>2</sub>-* → *\*g<sup>h</sup>h<sub>2</sub>-ó-* (cf. *\*g<sup>h</sup>h<sub>2</sub>-uó-* → *\*g<sup>h</sup>h<sub>2</sub>-uó-s-* (transp.) n. in Gk χάος) > *\*g<sup>h</sup>Ha-* > *\*k<sup>h</sup>Ha-* > *kha-*.

Summing up the discussion of sections 3.1-2, 4.1-2, four further hitherto intractable forms can be explained in this way. Are five examples sufficient to establish a sound law?

#### 4.3. Counter-examples

are surprisingly few. Ones that do exist can be explained **either** as analogical / late creations e.g. *bha-* n. ‘star, planet’ (sū. +) either restored from expected *\*b<sup>h</sup>H-a-* > *\*ph-a-* or simply created after the operation of the rule,

**or** the root has been reconstructed wrongly: see the case of *\*d<sup>h</sup>eg<sup>wh</sup>h<sub>2</sub>-*, which at least from the point of view of Vedic is anit: aor. *má dhak*, pres. *daghnóti*. Further, Toch. AB *kätk<sup>(ā)</sup>-* ‘cross, pass, overstep’ probably has a different etymology. Evidence for a laryngeal is thus confined to Greek. It may be that Gk ἔφθη, φθάνω etc. continues a Wurzelerweiterung *\*d<sup>h</sup>g<sup>wh</sup>-eh<sub>2</sub>-* [Much more to say here, but omitted for time’s sake.]

#### 5. Phonetic interpretation.

Would tentatively suggest that the sequence of breathy voiced stop + voiceless pharyngeal (or uvular) fricative *\*-d<sup>h</sup>h̥-* gave a “true voiced aspirate” [d<sup>h</sup>] uel [d<sup>h</sup>] which merged with *\*-t<sup>h</sup>-* > [t<sup>h</sup>].

For a “true voiced aspirate” beginning voiced and ending in voiceless aspiration cf. the famous case of Kelabit (Blust 1974:50, Kümmel 2012:294).

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