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VEDIC ROOTS OF THE TYPE *TERD^h-

1. In 1912, Antoine Meillet wrote: „M. F. de Saussure a remarqué et enseigné dans ses cours à l'École des Hautes Études qu'une racine indo-européenne n'admet pas la présence simultanée d'une sourde et d'une sonore aspirée: on peut avoir *beudh- ou *bheudh-, mais non *peudh-; *bheudh- ou *bheud-, mais non *bheut-. La justesse de cette belle remarque est aisée à vérifier en parcourant les dictionnaires étymologiques: on verra immédiatement que les exemples contraires se trouvent dans des mots dont l'emploi est limité à une seule langue, ou bien qu'il s'agit d'étymologies incertaines ou fausses”. Later, in his *Introduction*, Meillet (1937, 174) added to Saussure's rule that „une racine qui commence par *s plus consonne sourde peut finir par une sonore aspirée, ainsi: skr. *stighnute* 'il monte', v.sl. *stignq* 'j'irai', gr. *στειχω*, got. *steiga* 'je monte', v.irl. *tíagu* 'je vais'”.

In more recent handbooks, however, Saussure's restriction on the root structure is only admitted for roots of the type *ted^h-, *d^het- (cf. Mayrhofer 1986, 117, Beekes 1995, 162). It looks as if the authors consider *TeRD^h-/*D^heRT- roots possible. It is not my intention to analyze the whole Indo-European evidence¹, but a short survey of the Vedic material will suffice to show that, in general, *TeRD^h- roots are also subject to Saussure's rule².

2. The evidence presented below is a collection of all words from Mayrhofer's KEWA and EWAia with initial *k*, *c*, *t*, *p*, *ś*, which have

¹ A study of the Indo-European evidence contained in Pokorny's dictionary will be presented in a forthcoming article by M. de Vaan.

² To my knowledge, there are no *D^heRT- roots in Vedic. There are three roots of the type *D^hRe(R)T- (*√bhrāmś-* 'to fall off', *√bhrāś-* 'to be sharp', *√bhrās-*/*√bhlās-* 'to shine'), all of a conspicuously similar structure and without secure IE. etymology.

a voiced aspirate in the same or following syllable. This is a heterogeneous collection comprising many words which are of no use for our purpose, i.e. words of probable non-Indo-European origin, words of unclear meaning or etymology and words where the voiced aspirata belongs to the suffix or to the second member of a compound.

2.1. Words of probable non-Indo-European origin:

kakúbh- f. 'summit, peak', *kakuhá-* 'eminent', *kakubhá-* (AV 8.6.10) 'humped (?)' (cf. Lubotsky 1995, 128).

kandhara- (Up.+) m. 'neck'.

kukúndha- (AV) 'kind of spook'.

kúbhā- f. 'name of a river'.

kubhrá- m. (MS+) 'bull with humps'. Cf. also *kubjá-* adj. 'hump-backed'.

Connection with Gr. *κῶφος* is possible, but does not guarantee an IE. origin, especially in view of the long vowel in Greek.

kumbhá- m. (RV+) 'pot', *kumbhī-* (AV+) f., Av. *xumba-* 'id.' must be a *Wanderwort*, cf. Gr. *κύβη* 'drinking-vessel', *κύβος* m. 'bowl'.

2.2. Words/roots of unclear etymology or meaning:

kubhanyú- (RV 5.52.12) '?'.

(*višū-*)*kuh-*, *-kuha-* (S.+) 'zwiespältig' (cf. Sharma 1959, 103, 269 f.).

kṣúdh- f. 'hunger', Av. *šud-* 'id.' The IE. etymology is uncertain.

śibhrá- (AV 7.90.2) '?'.

śighrá- adj. (VS+) 'quick, swift'. The connection with Russ. *sigát'* 'to jump' and OE. *hīgian* 'to exert oneself, strive, hasten' is very doubtful. OE. *hīgian* is cognate with MiD *hīgen*, MoD *hijgen* 'to pant'. As already indicated in Franck, Wijk's Dutch etymological dictionary, the meaning 'to pant' seems to be primary for the Germanic words, so that they are probably of onomatopoeic origin. The Russian word is suspect because there are no other cognates in Slavic (except for Byelorussian *sihác*). Moreover, it is only attested in the Southern and Western dialects, i.e. exactly in those dialects where *i* merged with *'a* (< *e*) in pretonic position. It is therefore very likely that Preobraženskij's (2, 284) etymology explaining *sigát'* from **sēgati* is correct (*pace* Vasmer s.v.). Many years before A. Preobraženskij, V. Dal' wrote in his dictionary (I used the second edition from 1880) that „*sigat'*, *signút'* is derived from *sjagat'*” and added: „also pronounced *sjagát'*, *sjagnút'*, combining two meanings: to jump and to reach smth.” (translation mine).

śibham 'swiftly, quickly' (RV+). In Br., also *śibhá-*, *śibhya-* adj. are attested, used as a synonym of the preceding word, cf. MS, II, 9, 5, 124.

14 *námaḥ śibhāya ca śighráya ca*.

śūghaná- (RV 4.58.7) '?'.

√*śrambh-* 'to trust' (ep.+). The meaning of *ni-śrambhá-* (RV 6.55.6) is uncertain. Renou (EVP XV, 150) translates 'soumis' and remarks "nuance possiblement comparable à *nimrgra nīmiśla nikāma*". Geldner put "stolzierende" with a question mark in his text.

√*ślāgh-* 'to confide, trust' (Br.+).

śvābhra- m. 'gap, hole', Ir. √*sub-*: MP, MoP *sufitan*, *sumb-* 'to pierce, bore' (MacKenzie 1971, 78), Pashto *sūrai* < **subra-ka-* 'hole' (Morgenstierne 1927, 70). The IE. etymology is unclear (but cf. below).

2.3. Voiced aspirata belongs to the suffix or to the second member of a compound: *ka-dhā* 'where', *kár-hi* 'when', *tár-hi* 'then' (cf. also *etár-hī*), *kú-ha* 'where' < **ku-dha*, *śrad-dhā-* f. 'trust, confidence'.

3. The reliable evidence is the following:

krdhú- adj. 'mutilated, short', which has *s*-mobile, cf. the privative compound *áskrdhoyu-* and Lith. *skeřsti* (*skerd-*) 'to slaughter, kill', etc.

√*krudh-* 'to become angry', Av. √*xrud-*. Mayrhofer does not give any IE. etymology. I would venture to connect this root with Germanic verbs for 'to tear, cut', cf. OHG. *scrōtan*, OE. *scrēadian*, etc. and probably OPr. *scrundos* f.pl. 'scissors' with a secondary nasal infix (IEW 947). These forms point to **skreud^h-³*. To the same family probably belongs Lith. *skriaũsti* 'beleidigen, Unrecht tun, kränken, etc.', *skriaudūs* 'beleidigend, kränkend, traurig, jammerend, klagend', which in the Eastern dialects still means 'reißend, fließend, bröckelig, spröde'. The development 'to tear' ⇒ 'to become angry, impetuous' is commonplace, cf. Engl. *he is tearing*, OE. and OS. *torn*, OHG. *zorn* 'anger', probably derived from the verb for 'to tear' (OS. *terian*, OHG. *zerren*, etc.).

√*kṣubh-* 'to tremble', Av. *xšufsaṇ* (*s*-inchoative) 'to shake'. If Pol. *chybać* 'to swing' is related, this root may be of IE. age.

√*trh-* 'to smash' had *s*-mobile, cf. ÁpDhS. *strhantī-*, Hitt. *ištark-*, *ištarni(n)k-* 'to make ill, torment' (Eichner 1982, 17 f.).

plihán- m. 'spleen' also had *s*-mobile, cf. PIA. **spīhan-* in Nep. *phiyo*, Av. *spərəzan-*, Gr. *σπλήν*, etc.

śardha- m. 'host (of Maruts)', LAv. *sarōḍa-* n. 'species' < PIE. **(s)kerd^ho-* (Lith. *(s)kērdžius* 'shepherd', OCS. *črěda* 'herd', OPr. *kērdan* 'time', Goth. *hairda* 'herd', *hairdeis* 'shepherd', etc.). Mayrhofer rejects the connection, assuming with Grassmann that the original meaning of Skt. √*śardh-* is 'to be strong, to show strength', which is then incompatible with the meaning of

³ Pokorny IEW 947, reconstructs **(s)kreut-* for the Germanic family of words because of Lat. *scrūtōr* 'to explore', but the latter is most probably unrelated (cf. Ernout, Meillet, s.v. *scrūta*).

the IE. family 'Reihenfolge, Wechsel'. In reality, there is hardly any evidence for the original meaning 'force, power'⁴. The verbal root *śardh-* means 'to boast, intimidate (before the fight)' (the ptc. *śardhant-* often refers to an impudent enemy). To this root there are a few nominal derivatives, viz. *śrdhyā-* (RV 2.2.10) 'arrogance', *śardhya-* (RV 1.119.5) 'rivalling', *bāhuśardhīn-* (RV 10.103.3) 'boasting of his arms'⁵, *praśardha* voc. (RV 8.4.1), referring to Indra, rather means 'boasting, audacious' (PW translates s.v. *śardh-* 'keck, trotzig') and not 'gewaltig, sehr stark'.

On the other hand, *śardha-* m. and *śardhas-* n. mean 'host, troop', often 'a host of Maruts'⁶. The hapax *śardhastara-* (RV 1.122.10) is a *-tara-* derivative from the substantive *śardhas-* of the type *vīrātara-*, *vratātara-*, etc. (cf. AiGr. II, 2, 601 ff.), and must mean something like 'more similar to a host (of Maruts)'⁷.

It follows that *śardh-* never means 'to be strong', but rather has two, synchronically probably unrelated, meanings: 'to boast' in the verbal root, 'troop, host' in *śardha(s)-*. We find in Avestan two similar meanings: *sarōdanā* acc. pl. (Y 43.14) 'opponents, despisers' (Humbach 1991, 114 'challenge') and *sarōdiīia-*, possibly 'challenging', belong to the semantic sphere of Skt. $\sqrt{\text{śardh-}}$, whereas LAV. *sarōḍa-* 'sort, kind' is comparable to *śardha-* 'troop'. Bal. *sar* < **sard-*, Pashto *sarai* < **sarda-ka-* 'man' do not testify to the original meaning 'strength, power', but may have developed from 'a man of (our) kind, sort'.

The question is whether these two meanings are compatible. Toporov (1980, 315 ff.) extensively analysed the semantics of this word family and concluded that the original meaning of the IE. root was 'to be divided into (equal) parts' (for 'to boast' he offered a semantic parallel in German *vermessen* – *Vermessenheit*; another possible parallel is Russ. *rjad* 'row, rank' – *otriad* 'detached force' – *rjadit'sja* 'to dress, disguise oneself'). Furthermore, he convincingly argued that $\sqrt{*(s)kerd^h-}$ is an enlargement of $\sqrt{(s)ker-}$ 'to cut'. As to Skt. *ś* vs. PIE **(s)k-*, see below (Toporov only signals the phonetic problem on p. 323).

$\sqrt{\text{śudh-}}$ 'to make clean, purify', $\sqrt{\text{śubh-}}$ 'to adorn, beautify'. These two roots are different enlargements of the PIIr. root $\sqrt{*\acute{c}au-}$ (cf. also Arm.

⁴ It must be stressed that the semantic development 'force, power' \Rightarrow 'to show force' \Rightarrow 'to boast', advocated by Mayrhofer (KEWA III, 309 f., EWAia II, 620), is far from evident.

⁵ The meaning 'armstark' is very improbable (cf. PW s.v., Geldner ad loc., AiGr. II, 2, 346).

⁶ The translation 'Stärke', used by Geldner for *śardha-* in 2.1.5 and 8.93.16, and for *śardhas-* in 6.68.8, is unnecessary (cf. Renou EVP, X, 59; XII, 41).

⁷ At any rate, this comparative can hardly mean 'stärker', given by Geldner and adopted by Mayrhofer.

surb 'pure, hole', a borrowing from Iran. **subra-*, Skt. $\sqrt{\text{śuc-}}$: Av. $\sqrt{\text{suk-}}$ 'to shine', and, less probably, Skt. *śoṇa-* 'red, crimson'). No certain cognates of this root have been found outside IIR. It seems plausible, however, to connect the PIE. root **(s)keu(H₁)-* 'to observe' (Gr. *κοέω* 'to notice', OHG. *skouwōn* 'to look at', Skt. *ākūti-* f. 'intention'). It is well known that verbs for 'to look, observe' can also mean 'to look (or be) beautiful, shine', cf. PIE. **leuk-* 'to see, look' (e.g. Gr. *λεύσσω*) and 'to shine' (e.g. Skt. *rócate*). The root **(s)keu(H₁)-* is found in the meaning 'to look beautiful' in Goth. *skauns*, OHG. *scōni* 'beautiful'.

It is clear from this list that apparent Vedic roots of the structure *TERD^h-* generally reflect PIE. roots with *s*-mobile. The only exception is $\sqrt{\text{kśubh-}}$ 'to tremble'. As the PIE. origin of this root is uncertain, it seems premature to conclude that *TsERD^h* roots were allowed in PIE., although *kśudh-* f. 'hunger', Av. *šud-* 'id.' may also point in this direction (note, however, that this root noun may be an Indo-Iranian formation in *-udh-*, cf. Skt. *iśudh-*, Av. *išud-*).

4. We may now address the problem of the initial consonant in *śardha-* and some other roots where the comparative evidence points to **(s)ke-*. I assume the following chain of events (taking $\sqrt{\text{śardh-}}$ as an example): **skerd^h-* > **ščard^h-* (palatalization) > **ścard^h-* (assimilation of the initial cluster) > **č^hard^h-* > **card^h-* (Grassmann's Law) > *śardh-*. Since I hope to discuss the fate of PIE. **sk* in detail elsewhere, I only give short comments on the five steps involved in this development.

1) **skerd^h-* > **ščard^h-*. In my opinion, there was no opposition between **sk* and **šk* in PIE., the only attested variant being **sk* (cf. Zubatý 1892, Meillet 1894). PIE. **sk* in the position before **e*, *i* was palatalized in Indo-Iranian to **šč* and under normal conditions eventually yielded Skt. *ch*.

2) **ščard^h-* > **ścard^h-*. Cf. a comparable development in Slavic, where **ke* > **če*, but **ske* > **sče* > **šće* > OCS. *šte*, SCr. (dial.) *šće*, Czech *ště* (cf. Vaillant 1950, 48 f.). We have to assume this assimilation of the initial cluster because Skt. *-ch-* often reflects the original cluster **-śc-*, cf. *duchūnā-* f. 'misfortune' < **dus-čunā-* (*śunām* adv. 'happily', *śunā-* n. 'success, fortune' < **čunā-*). Moreover, initial *ś-* becomes *ch-* after final *-n* in the majority of Vedic texts, but, as Oldenberg (1888, 426 f.) and Leumann (1942, 16) have indicated, this reflex is phonetically regular only when *-n* goes back to original **-ns* or **-nt*. The sound change **tś*, *śc* > *ch* shows that *ch* originally was **č^h*, i.e. the aspirated counterpart of *ś* (**č*).

It should further be borne in mind that the disintegration of the Proto-Indo-Iranian series **č č^h j j^h* (< PIE. **č ski/e ġ ġ^h*), which eventually

yielded Skt. *ś*, *ch*, *j*, *h*, is a relatively recent phenomenon in Sanskrit, posterior to Grassmann's Law, as follows from the reduplicated formations like *ja-hā-* < **j^ha-j^hā-*, etc. (otherwise *h* would have never become *j* through the loss of aspiration). On the other hand, in the Proto-Indo-Iranian series **č j j^h* (< palatalized PIE. **k^(w) g^(w) g^{(w)h}*), the voiceless aspirata was lacking, which explains why **č^h* has become **č^h* (= *ch*), thus filling the gap.

3) **ścard^h*- > *č^hard^h*-. See sub 2). For the development of an aspirata from an original cluster with **ś*, cf. further the Vedic root *khyā-* 'to look' < **kčā-*, as follows from $\sqrt{kśā}$ - attested in the Maitrāyaṇī Saṃhitā and Av. *xsā-*.

4) **č^hard^h*- > *čard^h*-. Our handbooks (cf. AiGr. I: 124) normally tell us that when *ch-* loses its aspiration due to Grassmann's Law it becomes *c-*, but the roots with initial *c-* and an aspirate are conspicuously absent in Sanskrit, and, moreover, the alleged development *ch-* > *c-*/*c^h* is based on wrong evidence. The only argument in favour of this sound change is the perfect reduplication *ca-/ci-* of roots beginning with *ch-* (*cachanda*, *cicheda*), but, in fact, the Sanskrit roots with initial *sT-* (where *T* = any stop) reduplicate only the stop (cf. *tastāmbha*, *caskanda*, etc.). On the other hand, Iranian roots of this shape only reduplicate the *s*, cf. (*vi-*)*šastard* to $\sqrt{stā}$ -, (*auua-*)*hišidiīāt* < **si-skid-* to \sqrt{sid} -, etc. (cf. Kellens 1984, 406). In other words, the reduplicated formations **sTe/i-*/ \sqrt{sT} ... lost the initial **s* in Sanskrit and the **T* of the reduplication in Iranian. Consequently, the reduplicating syllable of *cachanda* reflects *ča* << **sča* < **ske-* and thus provides no information on the development of *ch* before an aspirate. I conclude that there is nothing against the assumption that when *ch-* loses its aspiration due to Grassmann's Law it becomes *ś-*.

5) **čard^h*- > *śardh-*. The final stage shows uncontroversial spirantization of the original palato-alveolar affricate, abundantly attested in Sanskrit (PIE. **k* > PIIr. **č* > Skt. *ś*).

The proposed development accounts directly for the initial *ś-* of *śardha-* < **skerd^ho-* and for the verbal roots $\sqrt{śudh}$ - and $\sqrt{śubh}$ - < **skeud^h-* / **skeub^h*- (with generalization of the palatalized variant of the initial *as*, for instance, in \sqrt{car} ⁱ-). We must then assume that the initial *ś-* of $\sqrt{śudh}$ - and $\sqrt{śubh}$ - later spread to $\sqrt{śuc}$ -, the phonologically regular reflex of which would have been **chuc-*. A comparable solution can be surmised for *śvābhra-* m. 'gap, hole', Ir. \sqrt{sub} -, if we connect this root with PIE. $\sqrt{skeub^h-}$ 'to push, tear' (Goth. *afskiuban* 'to reject', OHG. *scioban* 'to shove', etc., cf. Lubotsky 1988, 92), although the *Schwebeablaut* in the Sanskrit word remains unexplained.

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