Sanskrit roots *hi-* 'to impel, hurl', *hiṣ-* 'to injure, harm', *hīḍ-* 'to make/be angry' and the Indo-European root enlargements *-s-* and *-d-*

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Abstract: This article discusses several groups of Sanskrit roots which are likely to contain root enlargements *-s-* and *-s-d-*. Except for the roots mentioned in the title, these are, in the first place, *mr̥ṣ-* 'to forget' and *mr̥ḍ-* 'to be merciful' (< *mr̥ẓḍ-*); *iṣ-* 'to strive after, seek' and *īḍ-* 'to invoke' (< *iẓḍ-*).

1. The three Sanskrit roots *hi-* 'to impel, hurl', *hiṣ-* 'to injure, harm', *hīḍ-* 'to make/be angry' reflect PIE *$\acute{g}^h ei$-*, *$\acute{g}^h eis$-*, *$\acute{g}^h eisd$-*, respectively, and seem to be etymologically related. This relationship is indicated in a number of dictionaries (Walde−Pokorny 1926−1930 I: 546, Holthausen 1934: 34, Pokorny 1959: 424, 427, Lehmann 1986: 382a, Kroonen 2013: 163, to mention just a few), but Mayrhofer (EWAia: 820–1) is rather skeptical: "Bedeutungskombinationen (wie *$\acute{g}^h e\underline{i}$* 'antreiben' [*HAY*] ~ *$\acute{g}^h e\underline{i}s$* 'treffen, verwunden' [*HEṢ*[1]] ~ *$\acute{g}^h e\underline{i}s$-d* 'betroffen sein, aufgebracht sein, zürnen' [*HEḌ*]...) haben nur den Rang von Möglichkeiten".

Although I believe that these three roots do belong together, Mayrhofer's skepticism is understandable: the meaning of these roots is somewhat similar, but the connection is not evident, and the status of the root enlargements *-s-* and *-d-* is unclear. Ideally, in order to get beyond the "Möglichkeiten", we have to (1) scrutinize the meaning of the verbs; (2) find further parallels for the enlargements; (3) determine their meaning; and (4) explain the formation. The goal of my paper is much more modest: we will only be concerned with the first two points and leave the last two a task for the future.

2.1. PIE *$\acute{g}^h ei$-*

Except for Indo-Iranian *$\acute{j}^h ai$-*, the verbal root is not attested, while the most important IIr. finite forms are the following:

- Skt. *hi-* 'to impel, set in motion' (RV+): Present V *hinóti*; root-aorist *áhema* 1pl*., áhyan* 3pl.

- PIr. *$d^{\prime}ai$-: Av. *zai-* 'to set in motion': OAv. (*iuui-) zaiiaθā* 2pl. aor. subj. act.; YAv. *fra-zaiiaiiāmi* caus.; MParth. *'bz'y- /aβzāy-/* 'to begin (+inf.)'

The root aorist, attested in both branches, must be old, but the present cannot be reconstructed[1]. It is further conspicuous that a number of nominal derivatives in Indo-Iranian refer to weapons[2], cf.

- Skt. *hetí-* f. 'missile, weapon' (RV+);

- PIr. *$d^{\prime}aina$-: YAv. *zaēna-* m. 'weapon'; MP (Man., Pahl.), MParth. *zyn /zēn/* 'armor, weapon, sword', borrowed from Iranian into Toch. B *tsain* (pl. *tsainwa*) 'arrow' and Arm. *zēn* 'weapon, armor';

- YAv. *zaiia-* m. 'kind of weapon' (compounds *aiiō.zaiia-* 'with a metal weapon', *yāstō.zaiia-* 'with a weapon at the girdle'), *zaiian-* 'weaponed, armed', *zaēnuš-* n. 'baldric'.

This fact is important since nominal derivatives often preserve a more original semantics of the verbal root. Although both in Sanskrit and Iranian the verb has the general meaning 'to set in motion, incite', it is clear that this incitement was produced by giving a poke (root aorist!) with a pointed instrument, a goad of some kind, which would explain why the nominal derivatives could easily get the meaning 'weapon'. OE *gād* f. 'prick, goad' (< quasi-IE *$ǵ^hoi$-$téh_2$-) may point in the same direction. The original 'goad' developed into the names for different weapons, probably through a 'spear, javelin'.

In the RV, the verb *hi-* often takes the word for 'horse' as an object (see also Skt. *háya-* m. 'horse' (RV+), Arm. *ji* 'id.'), and we may assume that this method was specifically used for steering horses. This is also reflected in compounds like Skt. *āśuhéman-* (a.o., an epithet of a horse) 'of swift impulse' (cf. Epimakhov – Lubotsky forthc. for a discussion of the meaning of this word), *aśvahayá-* m. 'horse-driver'.

2.2. PIE *$ǵ^heis$-

- Skt. *hiṣ-* 'to injure, wound, hurt': Present VII *hinásti* (AV+), *híṃsāna-* (RV); all other forms are derived from the stem *hiṃs-*, except for *héṣas-* n. 'weapon' (RV), *heṣá-kratu-* 'with the intention to hurt' (RV);

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[1] Unless we assume that Av. *zaēnuš-* n. 'baldric' indirectly points to a present in *-nu-*.

[2] Of course, there are also productive derivatives like PIIr. *j^haiman- (Skt. *hemán-* m. 'impulse, zeal, driving' (RV), OAv. *zaēman-* n. 'activity'), Skt. *hetú-* m. 'motive, cause', YAv. *zaēni-* adj. 'zealous, vigilant', etc.

- PIr. *d^{h}aiš-:[3] YAv. *zaēša-* 'hateful' (F 629), Khot. *ysäṣṭa-* 'hateful, hostile'; Sogd. (Buddh.) *zyštk* 'hate'; MP *zyšt* /zišt/ 'hated, hateful, ugly'; MParth. *zys-* /zēs-/ 'to hate';

- Goth. *us-gaisjan**, only in *usgaisiþs ist* 'ἐξέστη, is out of his mind, beside himself', *us-geisnan* 'ἐκθαμβεῖσθαι, ἐκπλήσσεσθαι, ἐξίστασθαι, to be aghast, astonished'.

What was the original meaning of PIE *$\acute{g}^{h}eis$-? In LIV[2] (M. Kümmel), we find the following proposal: "Wohl urspr. fientiv, die ved. Bedeutung 'verletzen' (...) ist wohl durch Spezialisierung auf 'durch eine Verletzung in Angst versetzen' entstanden." This scenario cannot be correct for a number of reasons. First of all, the meaning of the Gothic verbs is not 'to be frightened / to frighten' (as it is often rendered), but primarily 'to be astonished, amazed'. This meaning can easily arise from 'to be hit, struck (ἐκπλήσσεσθαι !)', whereas *usgaisiþs ist* 'ἐξέστη, is out of his mind, beside himself' can go back to 'to be wounded, tormented'. The concrete meanings are normally more original, and we would rather expect the development 'to hit' > 'to astonish' than the other way round. Further, Germanic derivatives of this root, like OHG *geis(i)la* 'whip', ON *gísli* 'stick', etc. (see EWA IV: 125–6) clearly point to a concrete meaning.[4]

2.3. PIE *$\acute{g}^{h}eisd$-

Skt. *hīḍ-* 'to make angry [act.]; to be angry (with smbd.) [med.]' (RV+): present I *á-heḍant-*, *á-heḍamāna-*; perfect *jihīḍa*, *jihīḍe*; causative *áheḍayant-* with reduplicated aorist *ájīhiḍat*; ta-ptc. *hīḍitá-*;

PIr. *d^{h}aižd-: YAv. *zōiždišta-* 'most terrifying' (epithet of *xrafstra-* 'wild beast')[5];

- OHG *geist* m. 'ghost', OE *gǽstan* 'to frighten, afflict, torment';

- Lith. *žeidžiù* 'to wound' < *$\check{z}eidžiù$, as follows from *žaizdà* 'wound' (the older form of *pa-žaidà* 'internal injury, offence', Fraenkel: 1285).

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[3] EWAia does not mention the Iranian forms, but it is attractive to include them here; for the meaning see below.

[4] PGerm. *$gaiza$- m. 'spear' (ON *geirr*, OE *gār*, etc.) < *$\acute{g}^{h}ois$-ó- also belongs here, if Celtic (cf. OIr. *gae* m., MW *gwaew* m.f. 'spear' < *$g^{h}aiso$-) has borrowed this word from Germanic. The Germanic word can then be identified with Skt. *heṣá-*.

[5] Most likely, the positive belonging to this superlative is OAv. *zōišənu-*, YAv. *zōišnu-* 'terrible'. We can reconstruct PIr. *zaizd-nu-* and assume the following steps: *zaiždnu- > *zaižnu- (with *-dn- > -n- like in *būna-* 'bottom' < *budna-) > *zaišnu- (with -žn- > -šn- like in *fra-šnu-* 'holding the knee forward'). A similar case is OP *ašna-* 'close' (positive of *nazdias-) < *azdna- < *nsd-no-.

Lithuanian still has the concrete meaning, but both Germanic and Indo-Iranian point to the meaning 'to terrify, infuriate', which probably means that the PIE *$\acute{g}^heisd$- already had this meaning in the proto-language, unless Germanic and Indo-Iranian have independently developed this notion.

2.4. We thus arrive at the PIE triad *$\acute{g}^hei$- 'to give a poke (steering a horse)' → *$\acute{g}^hei\text{-}s$- 'to wound, injure' → *$\acute{g}^hei\text{-}s\text{-}d$- 'to wound, torment'. The analysis of the meanings has shown that they are so close that the etymological relationship between the roots can hardly be doubted. What can we say about the semantic and morphological changes? Both *$\acute{g}^hei$- and *$\acute{g}^hei\text{-}s$- are telic, both have nasal presents in Sanskrit[6], and it is not quite clear what kind of meaning the additional -s- may have (but see below, §6). On the other hand, -d- in *$\acute{g}^hei\text{-}s\text{-}d$- seems to convey a frequentative meaning: by constantly wounding an animal you would frighten, infuriate it. In Sanskrit, its present *heḍa*- seems to be primary.

3. The next point to be addressed is the question whether we can discover more triads of this kind. For that purpose let us now take a closer look at a number of Indo-Iranian roots in *-žd*- in order to investigate whether they may have had a similar derivational history, all the more so as this is not a normal structure for an IE root.

3.1. PIIr. *maržd*-

– Skt. *mṛḍ*- 'to be merciful, take pity, pardon' (RV+; -*ṛ*- is always metrically long): present VI *mṛḍáta* 2pl.; present X *mṛḍáyāti*; perfect *mamṛḍyur*;

– PIr. *mržd*-: OAv. *mərəžd*- 'to have pity': *mərəždātā* 2pl.impv.; MP (Man.) *'(')mwrz*-, (Pahl.) *'mwlc*- /*āmurz*-/ 'to forgive, absolve'; NP *āmurzīdan* 'to pardon, take pity'.

Presumably, there was no ablaut in the root in PIIr.; the full grade is practically only attested in Skt. *marḍitár*- 'one who shows compassion, comforter', which can easily be analogical.

Now, if we assume that the root *maržd*- contained an element -*d*-, by subtracting it we arrive at *marš*- (< PIE *mers*-) 'to forget'.

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[6] Although the root aorist of *hiṣ*- is unattested (the stem *hiṃs*- was generalized very early), it can be postulated on account of the nasal present. Both *$\acute{g}^hei$- and *$\acute{g}^hei\text{-}s$- are thus clearly "aoristic roots".

3.2. PIE *mers-

– Skt. *mr̥ṣ-* 'to forget' (RV+): present IV *mr̥ṣyate* 3sg. med.; root aorist *mr̥ṣṭhāḥ* 2sg. inj. med., *mr̥ṣanta* 3pl. inj. med.; *iṣ*-aorist *marṣiṣṭhāḥ* 2sg. inj. med.; perfect *mamárṣa* 3sg. act.; causative *marṣayanti* 3pl. act. (MS+) with reduplicated aorist *mīmr̥ṣaḥ* 2sg. inj. act. (RV+);

– PIr. **fra-ā-marš-*: Sogd. (Buddh.) *fr''wyšcy*, 'forgetfulness'; MP (Man.) *fr'mwš-* /*frāmōš-*/ 'to forget', NP *firāmūštan* 'id.'

– Arm. *moṙanam* 'to forget';

– Lith. *už-miřšti*, Latv. *àizmìrst, pìemìrst* 'id.';

– Toch. AB *märs-* 'id.'

    The Sanskrit adverb *mr̥ṣā* 'in vain, useless', in combination with Hitt. *maršant-* adj. 'deceitful, dishonest; unholy, unfit for sacred use', shows that the original meaning of the PIE root **mers-* was 'to be gone, disappear' and that we are dealing with an *s*-enlargement of **mer-* 'to disappear, die' (cf. Kloekhorst 2008: 577). A natural way to get from 'disappear' to 'forget' is to assume a construction 'it has disappeared to me / it has escaped me' = 'I have forgotten' with the so-called "dative subject". This construction squares well with the constant middle voice of the root Skt. *mr̥ṣ-* (cf. PIE **men-* 'to think', which shows a similar distribution).

3.3. This analysis leads to one more triad: PIE **mer-* 'to disappear [Anat.]; to die (a euphemism)' → PIE **mer-s-* 'to forget' → PIIr. **mr-ž-d-* 'to be merciful'. Here again, both **mer-* and **mer-s-* are similar in meaning and clearly aoristic, with their root aorist (Hitt. *me-er-zi*, Skt. *mr̥thās* and Skt. *mr̥ṣṭhāḥ*, respectively) and a derived *i*-present (Skt. *mriyáte*, Lat. *morior*, OCS *umьrjetъ* and Skt. *mr̥ṣyate*, respectively). As to PIIr. **mr-ž-d-*, it primarily forms a present, 'to be merciful' said about a deity who will constantly forgive and forget our misdeeds.

4. The last triad which I would like to present here is more controversial because of its abstract semantics.

4.1. PIIr. **Hižd-*, PIE **h₂eisd-*

– Skt. *īḍ-* 'to invoke, worship' (RV+): present *íḷe* 1sg., *íṭṭe* 3sg. med.; perfect *īḷé* 1sg. med. (RV);

– PIr. **Hižd-*: OAv. *išasōiṯ* 3sg. pres. opt. 'to implore' (for /*išsa-*/ < PIr. **Hižd-sa-*, an inchoative present);

– Goth. *aistand* 3pl.pres.act. 'to respect', *aistands* ptc. pres. act. 're-
specting'.

It is uncertain whether Gr. αἴδομαι 'to venerate' belongs here, because
"we would expect *$h_2$eisd-* to appear as Gr. αἰζ- (cf. ἵζω < *si-sd-)"
(Beekes 2010, s.v.). Like in the case of *$mr\check{z}d$-*, IIr. *$Hi\check{z}d$-* only attests
zero grade of the root.

By subtracting the element -*d*- from the root, we arrive at PIIr. *$Hai\check{s}$-*,
PIE *h_2eis-* 'to seek, request'. Semantically, the connection is likely,
because 'worshipping, imploring' amounts to '(constantly) asking, re-
questing'.

4.2. PIIr. *$Hai\check{s}$-*, PIE *h_2eis-*

– Skt. *$i\d{s}$-* 'to wish, strive after': *sk*-present *icháti*; ?them. aorist *$i\d{s}ema$*
   1pl. opt. act., *$i\d{s}e$* 1sg. inj. med.; perfect *$\bar{\imath}\d{s}uh$* 3pl. act., etc.;

– PIr. *$Hai\check{s}$-*: Av. *$i\check{s}$-* 'to wish, seek': *sk*-present YAv. *isaiti*, Av.
   $is\partial mna$-; ?OAv. *$\bar{a}i\check{s}$* 2sg. act. (s)-aor.; ?YAv. *$^{x}a\bar{e}\check{s}ii\d{q}n$* 3pl. s-aor.
   opt. act.;

– OHG *eiscōn* 'to claim, demand'; Lith. *(j)ieškóti* 'to seek'; OCS *iskati*
   'id.'; Arm. *hayc^{c}em* 'to seek, demand'; Lat. *aeruscō* 'to beg'; ON *eir*
   f. 'mercy', OE *ār* f. 'honor, dignity, mercy'.

Since the Indo-Iranian – derived – *sk*-present is old (the cognate verbs
in other branches are all denominal, however), the root must be telic,
with an approximate meaning 'to request'. Here, again, nominal deriv-
atives may help shedding light on the original meaning of the verbal
root. The most frequent and typical among them is Skt. *gáv-i\d{s}ti-* f.,
usually translated as 'quest for cattle' (Jamison and Brereton), 'Suche
nach Kühen / Rindern' (Geldner). At RV 10.61.23, however, Geldner
translates *gávi\d{s}tau* as 'auf einem Beutezug', and I think this is exactly
what a *gávi\d{s}ti-* was: a cattle raid, executed by the members of a Män-
nerbund. The raiders themselves are called Skt. *gav-í\d{s}-*, *gav-i\d{s}á-*, or
gav-é\d{s}ana-. In view of the telic character of the root Skt. *i\d{s}-*, Skt. *gáv-
i\d{s}ti-* must mean 'claiming of the cows' or just 'appropriating (= steal-
ing) cows'.

4.3. If we further follow the pattern of the preceding sections and
subtract the -*s*- from the root, we arrive at PIE *h_2ei-* attested in Gr.
αἴνυμαι 'to take hold of, seize' and Toch. B *ai*-, Toch. A *e*- 'to give (act.),
take (med.)'. In view of the considerations discussed in the preceding

section, the semantics seems appropriate.[7] The root PIE *h_2ei-* is clearly telic, too.

4.4. The triad then is PIE *h_2ei-* 'to take hold of' → PIE *h_2ei-s-* 'to claim (booty), to demand' → PIE *h_2ei-s-d-* 'to implore'.

5. Finally, I would like to add two pairs in -*s*- and -*s-d*-, which seem to follow a similar pattern.

5.1. PIE **pisd-*

– Skt. *pīḍ-* 'to press, squeeze (out)' (RV+): present *pīḍaya-* (AV+); perfect *pipīḷé*;

– Gr. πιέζω 'to press, push'.

The remarkable full grade in Greek remains enigmatic[8], but its connection with the Sanskrit verb can hardly be denied.

5.2. PIE **peis-*

– Skt. *piṣ-* 'to crush, grind': present VII *pináṣṭi, piṃṣánti*; perfect *pipéṣa*;

– YAv. *pišaṇt-* 'crushing, bruising' (aorist ptc.);

– Gr. πτίσσω 'to bruise, husk'[9]; Lat. *pīnsere* 'to crush'; Lith. *paisýti* 'to peel'; RussCS *pъxati* 'to thrust, sprout'.

The nasal present attested in Sanskrit and Latin points to a telic root, and a root aorist participle is indeed found in Avestan.

5.3. PIE **krisd-* > PIIr. **križd-* > Skt. *krīḍ-* 'to play, jest, flirt, frolic' (RV+): present I *krī́ḷanti* 3pl.act. (RV+); present X *krīḍay°* (Sū.+); perfect: *cikrīḍa* (Br.+). The same root without -*d*- seems to be present in PGerm. **hris-* (< PIE **kris-*): Goth. *af-hrisjan* 'to shake off', OE *hrissan* 'to shake (intr.)'[10].

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[7] For the semantic development, cf. further Gr. αἰτέω 'to ask, beg', which must be derived from the root of αἴνυμαι, although the exact semantic path remains unclear (cf. Chantraine 40 and especially 41).

[8] Usually considered a rebuilding of **πίζω (after ἕζω), but an IE ablaut **piesd-/pisd-* cannot be excluded (cf. Avestan *siiazd-/sižd-* 'to withdraw; to expel, banish').

[9] If we take the Greek initial cluster seriously, we might reconstruct **tp-ei-s-* and relate the BSl. verbs OCS *teti* 'to flog, beat' (1sg. *tepǫ*), Lith. *tèpti* 'to smear, grease, soil'.

[10] It is usually assumed that ON *hrista* 'to shake' goes back to PGm. **hrist-* < PIE **krisd-* and is thus directly related to PIIr. **križd-*, but since ON *hrista* is isolated

6. By way of summarizing, let us present our results in a table:

ǵʰei- 'give a poke' [aor.]	*ǵʰei-s-* 'wound' [aor.]	*ǵʰei-s-d-* 'terrify' [pres.]
mer- 'disappear' [aor.]	*mer-s-* 'disappear/forget' [aor.]	*mr-s-d-* 'be merciful' [pres.]
h₂ei- 'seize' [aor.]	*h₂ei-s-* 'claim, rob, seek' [aor.]	*h₂ei-s-d-* 'implore' [pres.]
	peis- 'crush' [aor.]	*pis-d-* 'press' [pres.]
	kreis- 'shake' [?]	*kris-d-* 'play, frolic' [pres.]

In all these cases, the roots both with and without -s- are aoristic, while a -d- is a present suffix. The element -d- has continuous semantics, but this may simply be due to it being a present formant. The meaning of -s- is more difficult to grasp. In Cohen 2017, it is suggested that -s- introduces telicity, but this can hardly be correct because the roots without this element are already telic. The same is valid for the pairs like *ḱleu-* 'to hear' (with its root aorist in Indo-Iranian and Greek) vs. *ḱleu-s-* 'to listen, obey', *ten-* 'to stretch' (root aorist in Vedic) vs. *ten-s-* 'to drag', *ḱlei-* 'to lean' (IIr. root aorist) vs. *ḱlei-s-* 'to adhere, stick', etc.

The difference between roots with and without -s- can rather be described in terms of duration of the action: roots without -s- refer to a telic, often momentaneous action, while those with an -s- describe a prolonged activity, but limited in time[11].

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within Germanic (all other cognates point to *hrisjan-*), it is more economical to assume that the ON verb is a frequentative in *-atjan-*, which was very productive (G. Kroonen, p.c.).

[11] This distribution has been suggested to me by Professor Frederik Kortlandt. If we may identify this -s- with the morpheme of IE sigmatic aorist, it then becomes understandable why thematic presents (with full grade of the root), which normally describe processes, are provided with s-aorists (Gotō 1987: 65–6).

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