

Indo-Iranian **mastrg^han-* / **mastṛj^han-* ‘brain, skull’ and its etymology

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Abstract. The purpose of this short note is to clarify the meaning, the original inflection and the etymology of the Indo-Iranian word **mastrg^han-* / **mastṛj^han-* ‘brain, skull’.

Keywords: Avestan, Indo-Iranian, Middle Persian, Vedic, Atharvaveda, Proto-Indo-European

0. The Indo-Iranian reconstruction **mastrg^han-* / **mastṛj^han-* ‘brain, skull’ is based on the following forms.¹

1. YAv. *mastərəyan-* m. is attested five times, 4× in the Farhang-i Ōīm and once in the Mihr Yašt: 2× loc.sg. /*mastryni-a-* with the postposition *ā* (*mastryniia* F 110, *mastrynaiia* F 112), 2× gen.pl. /*mastryṇām-* (*mastrauanqm* F 115 and *mastraynqm* F 116 for **mast(ə)rəynqm*), and once acc.pl. /*mastryṇas-ca-* (*mastarəynas-ca* Yt 10.72). In Farhang-i Ōīm, the word is used in the meaning ‘skull’ (see Bartholomae 1904: 1155, Klingenschmitt 1968: 46-47). Later, Klingenschmitt (apud Eichner-Kühn 1976: 33-34, fn. 14) argued that “an der Farhang-Stellen met dem anderwärts gesicherten Bedeutungsansatz ‘Gehirn’ auszukommen ist”, but had to assume that the word with the meaning ‘brain’ was used “in ungenauer Formulierung zur Bezeichnung des Gehirnschädels”. Furthermore, the meaning ‘brain’ elsewhere is not so certain either. Although this meaning may be more probable in Yt 10.72, the passage still remains ambiguous in this respect:

hakaṭ vīspā aipi.kərəntaiti
yō hakaṭ astāśca varəsāśca
mastarəynasca vohuniśca
zəməda hqm.raēθβaiieiti
miθrō.drujqm mašiiānqm

Bartholomae (op. cit.) gives the meaning ‘Gehirn’ for this passage, and Gershevitch (1959: 107-108) translates accordingly: “he cuts to pieces everything at once, mingling (*lit.* he who mingles) together on the ground the bones, the hair, the brains, and the blood of men false to the contract.” Nevertheless, since the list also contains bones, it cannot be excluded that the poet rather intended the skulls.

2. In Middle Persian, this word is likely to mean ‘skull’. Pahlavi *mstlg* /*mastarg*² is attested in the Ardā Wirāz Nāmāg, where the passage (§46) reads: *u-m dīd ruvān ī mard-ē(v) kē mastarg ī mardōmān pad dast dārēd ud mazg hamē xwarēd* ‘Et je vis l’âme d’un homme qui tenait à la main des crânes humains et [en] mangeait la cervelle’ (Gignoux 1984: 93, 187).

¹ I am indebted to Michaël Peyrot, Tijmen Pronk, and Lucien van Beek for helpful comments on the draft of this paper.

² Spelled *mstwlg* in the manuscript K20 (Vahman 1986: 140), presumably standing for /*masturg*/ with different vocalization. The compound *rat-mastarg*, attested in *Škand-gumānīg Wizār*, is less clear in this respect. In de Blois et al. 2006: 140, it is glossed by Taillieu as ‘empty-skulled; featherbrained’.

In Manichaean Middle Persian, the only attestation is *mstgrg* /mastagrag/. The passage (M781 i R 6ff.) was read by Henning (1947: 40) as 'wd 'ndr [...] (d)g nšydyd 'wd 'ndr mstgrg ['y m]rdwhm 'n 'wd xwnyhyd tb and translated as: 'It settles in the ... and in the brain (?) of men. (Then) it is called Fever'. In Mary Boyce's Reader (1975: 187), the text is slightly different, with an improved ['y](st)g instead of [...] (d)g³. Because of the parallelism to ['y](st)g 'bone' we would rather expect *mstgrg* to mean 'skull', so that the translation would be 'And it sits in the bone and in the skull of men. And it is called fever.'

3. In modern Iranian languages, the word is very rare. We only find it in two contiguous languages, i.e. Pashto (*mastáryay* 'brain') andOrmuri (*mastáry* 'id.', Morgenstierne 1932: 6, 2003: 52). Morgenstierne (2003: 52) considers the Pashto word to be a loanword from Persian. In view of a huge influx of Pashto and Dari loanwords in Ormuri, it seems reasonable to assume the same origin for the Ormuri word, too.

4. The Sanskrit word *mastṛhan-* has been for the first time identified by Burrow (1970: 50)⁴ in the Kauśika Sūtra 2.2[11].16, where Bloomfield's edition (1890: 33) reads *jihvāyā utsādyam akṣyoh paristarānamastṛhaṇam*. Burrow has pointed out that the text must be slightly emended to ⁺*paristarānam mastṛhaṇam* (for the meaning of the passage see Eichner-Kühn 1976: 23-25) and that *mastṛhan-* must correspond to Av. *mastərəyan-*. From the passage itself it can hardly be determined whether *mastṛhan-* means 'brain' or 'skull': it is a body-part of a speckled cow.

It now turns out that this word is already attested in a prose passage of the Paippalāda Saṃhitā (Griffiths – Lubotsky 2003: 201-2, Selva 2019: 143ff.), cf.

PS 17.21.1 *asṛñ māmsaṃ tvacaṃ peṣṭraṃ mastṛhaṇam ⁺majjñāḥ śarīram |*
 agniḥ kravyād ⁺atv ⁺amuṣyāmuṣyāyanasyāmuṣyāḥ putrasya ||

'Let Agni, the eater of bloody flesh, eat the blood, the flesh, the skin, the meat, the brain, the marrows, the body of N.N., the descendant of N.N., the son of N.N.'

Here, the meaning 'brain' is more likely, since the list contains all kinds of "edible" parts of the body, but 'skull' is not entirely impossible.

5. In Middle and Modern Indo-Aryan, this word is not found. Turner (CDIAL, s.v. *masta* 9926) mentions *mastrāk* 'brain' from the Areti dialect of Pashai (a group of Dardic languages), but its preserved *-st-* clearly points to an Iranian (Pashto) origin.

6. We may conclude that the word for 'brain, skull' was a masculine *n*-stem **mastṛg^han-* or **mastṛj^han-*. The former variant is found in Iranian, the latter is found in Indo-Aryan, which suggests an original Indo-Iranian alternating paradigm similar to that of Skt. *vṛtra-hán-* m. 'Vṛtra-slayer (epithet of Indra)' (nom.sg. *-hā́*, acc. *-hāṇam*, gen. *-ghnás*, etc.) and OAv. *vərəθrəman.jan-*, YAv. *vərəθrajan-* adj. 'victorious' (nom.sg. *-jā́*, acc. *-janəm*, gen. *-ynō*, etc.) reflecting PIIr. **-j^hā*, **-j^hanam*, **-g^hnas*. This original paradigm also accounts for the distribution of forms: it is hardly coincidental that in Sanskrit we only find full grade of the suffix (*mastṛhaṇam*), whereas in Avestan we only find zero-grade of the suffix (/mastṛyn-/).

³ I am indebted to Desmond Durkin-Meisterernst for consultations on the Middle Persian material. He suggests (p.c.) that the improved text goes back to W. Sundermann.

⁴ Later, the same discovery was repeated, most probably independently, by Ingrid Eichner-Kühn (1976: 23ff.).

In spite of the apparent archaic inflection, it is not by definition certain that the masculine *n*-stem was inherited in PIr. It is conspicuous that several Indo-Iranian terms for body-parts like Skt. *majján-* ‘marrow’, *mūrdhán-* ‘head, forehead’, *plīhán-* ‘spleen’ (~ YAv. *spərəzan-*), and *mastṛhan-* are all masculine *n*-stems, while this grammatical category is far from productive. Most likely, this inflection spread from one word to the others, but it is hard to determine where this process had started. The *n*-stem of Skt. *majján-* is matched by a formation in **-en-* in Balto-Slavic (OPr. *musgeno* ‘marrow’; Lith. *smāgenės* ‘marrow, brain, gum’; RuCS *moždeni* ‘brains’; SCr. *moždēna* (dial.) Npl. n. ‘brain’, cf. Derksen 2007: 328)⁵; that of *mūrdhán-* is matched by OE *molda* m. ‘crown of the head’ < **mlHd^h-en-*.⁶ For the *n*-stem body parts, see Pronk 2015: 332ff.

7. As we have seen above, it is not easy to decide on the exact meaning of Indo-Iranian **mastṛg^han-*, both ‘brain’ and ‘skull’ being possible. In order to put the problem in a broader perspective, let us look for other words for ‘brain’ and ‘skull’ in Indo-Iranian.

In Sanskrit, the word for ‘brain’ is *mastiṣka-* m.n. (RV+)⁷. Next to it, there is a separate word for ‘marrow’, *majján-* m. (RV+). For ‘skull’, early Vedic uses *kapāla-* n. (AV+), also ‘skull-bone’, which no doubt is a metaphorical usage of *kapāla-* ‘cup, jar’ (TS+), cf. Eng. *cup* (vs. German *Kopf*), Latin *testa* ‘jar’ (vs. French *tête*), Russian *čerepok* ‘shard’ (vs. *čerep* ‘skull’), etc. Both *mastiṣka-* ‘brain’ and *kapāla-* ‘skull(-bone)’ occur several times in the AV, and it is unclear why in one prose passage⁸, the Paippalāda Saṃhitā used *mastṛhan-* instead.

The Iranian languages do not usually have a separate word for ‘brain’: the reflexes of PIr. **mazga-* in almost every Iranian language have both meanings, ‘brain’ and ‘marrow’. This is the case for YAv. *mazga-* (F 216, glossed by Phl. *mzg*), Khot. *mājsā*, Sogd. *myz-*, Khwar. *mazy*, MP (Man.) *mgj* /*magž*/, (Pahl.) *mzg* /*mazg*/, MoP *mayz*, Oss. *mağz*, Yazg. *mūyz*, Pashto *māzyá*, *māyzá*, etc. Among Old and Middle Iranian languages, only Khotanese has a separate word for ‘brain’, *māstai* ‘brains, head’ (< **masta-ka-*), which might be due to Indian influence, however, cf. Skt. *mastaka-* m.n. ‘brain-pan, head’ (GrSū.+), Pāli *matthaka-* ‘id.’. As to the word for ‘skull’, I do not know of any other Iranian word which may be of Proto-Iranian date.

Since there are no arguments in favor of one of the two meanings, we may tentatively conclude that Indo-Iranian **mastṛg^han-* could mean both ‘brain’ and ‘skull’.

8. Now we can turn to the etymology of Iir. **mastṛg^han-* or **mastṛj^han-*. Watkins (1995: 535) suggested that this Indo-Iranian word be related to Latin *masturbari*, and this etymological proposal was further developed by Katz (1998: 210-214). In spite of the eloquent pleading of Katz, this connection is beset with phonological and semantic problems and remains very uncertain (see also de Vaan 2008: 70, 366, Weiss 2010: 266, fn. 71). The word is thus limited to Indo-Iranian.⁹

⁵ Both in Balto-Slavic and in Sanskrit, this *n*-stem is often (in some languages even always) used in the plural, which suggests that the singular originally referred to the marrow of one bone (in SŚ 2.12.7 = PS 2.5.8, *aṣṭaú majjñás* ‘eight marrows’ are mentioned) and that, consequently, the *n*-stem was a kind of singulative to **mozg^ho-*.

⁶ The alternative etymology, i.e. the connection with Toch. B *mrāce*, Toch. A *mrāc* ‘head, summit’ < **mrHd^h-en-* (cf. Winter 1965: 205), also points to an *n*-stem.

⁷ In late texts, we also find *mastuluṅga-* m.n. (Suśr., BHS+), which presumably is a hypersanskritism of Pkt. *matthuluṅga-*, Pāli *matthaluṅga-* with an unclear second part. The suffix of *mast-īṣ-(ka-)* may be due to the influence of *kraviṣ-* ‘bloody meat, flesh’.

⁸ The metrical considerations are thus excluded. Also old formulaic diction is improbable in prose passages.

⁹ Watkins (op.cit.) has also suggested that “Tocharian B *mrestīwe* ‘marrow’ shows a form transposed from **mestr-*, IE **most-r-*”, which would mean that Tocharian might have had a similar word, too. This is certainly an attractive, but uncertain suggestion.

PIr. **mastrg^han-* obviously cannot be separated from the PIIr. words for ‘brain’ which we have already mentioned above (Skt. *mastiṣka-* m.n. ‘brain’, *mastaka-* m.n. ‘brain-pan, head’, Khot. *māstai* ‘brain, head’), but its formation has not yet received a plausible explanation. Toch. A *māśśunt* ‘marrow’ (< **mäścunt-* < **mesti-uent-*) provides a perfect cognate for PIIr. **masti-* ‘brain’, which suggests that PIr. **mastrg^han-* must be analysed **mast-rg^han-*, but what is its second part? Mayrhofer (EWAia II: 336) writes: “Die iir. Formen weisen auf archaische Suffix-Verhältnisse, z.T. vielleicht auf Ausgleich innerhalb eines heteroklitischen Paradigmas hin: etwa **mast-rg^h-* / **mast-(a)n-* ... iir. **mastrg^han-* wohl kontaminiert aus **st-rg^h-* und **st-an-*”.¹⁰ This explanation, which eventually goes back to Bartholomae 1900: 118, seems highly improbable to me. We should not analyse **mastrg^han-* as **mast-* plus a bunch of suffixes, but rather as a compound **mast-(m)rg^han-*. It can hardly be accidental that **-rg^han-* shows the same sequence of phonemes which we encounter at the end of PGm. **bráгна-*¹¹ < PIE **mrog^hno-* (OE *brægen*, OFri. *brein* n. ‘brain’). This Ingvaenonic word is usually connected with the Homeric hapax βρεχμός m. ‘front part of the head’ (Il. 5.586) < PIE **mreg^hmo-* (in some later authors, also βρέχμα, βρέγμα n. ‘id.’; Galen uses the plural of this word in the meaning ‘parietal bones’).

There are various ways to relate the Germanic and the Greek words. In order to account for *e* in Greek vs. *o* in Germanic, one of the options is to reconstruct a *mn*-stem (thus Kroonen 2013: 73) and to assume that Germanic *-n-* vs. Greek *-m-* is due to different simplifications of the cluster. The masculine gender of the Homeric form suggests that the original noun was masculine. We can also assume two different formations, i.e. **mrog^hno-* and **mreg^hmo-*, or an original *n*-stem and assimilation *n > m* in Greek¹².

Remarkably, the meanings of PGm. **bragna-* ‘brain’ and βρεχμός ‘cranium’ exactly match those of the Indo-Iranian word (Sanskrit ‘brain’, Iranian ‘brain, skull’). The compound **mast-(m)rg^han-* may thus have originally meant something like ‘brain-pan’. The meanings ‘head’ and ‘brain’ are often interchangeable. For instance, the PIE word for ‘head’, **kérh₂-s-*, has got the meaning ‘brain’ in Germanic **hersan-* / **herzan-* (ON *hjarni*, ME *hernes*, Du. *hersenen*, *hersens* pl., etc.) and in Lat. *cerebrum*. Later, this word for ‘brain’ has again acquired the meaning ‘skull’ in Dutch dialectal *harse(n)s* and in some French dialects (Adams 2013: 780-781). Presumably, Proto-Indo-Iranian has formed the compound with the initial **mast-* ‘brain’ for the sake of disambiguation.

9. At the end, I would like to add a remark on the PIE words for ‘brain’. The Proto-Indo-European word for ‘marrow, brain’ is **mosg^ho-*¹³: PIr. **mazga-* (see above, section 7); OHG *marg*, *marc*, OE *mearg*; ORuss. *mozgъ*. In view of PIr. **mastrg^han-* / **mastj^han-* and **masti-*, it seems attractive to assume that PIE **mosg^ho-* reflects an earlier **most-g^ho-*, even though the element *-g^ho-* is unclear.

¹⁰ In a slightly different way, Watkins (1995: 535) suggests that **mostj(g)* is metathesized from **mosg^hrt* (recte: **mostj(g^h)* and **mosg^hrt*, respectively).

¹¹ The accent follows from Kluge’s Law.

¹² The proposed analysis of the **mastrg^han-* does not depend on the issue whether and how the Germanic and the Greek words are connected.

¹³ The reconstruction **mosgo-*, which is found in Pokorny 1959: 750, can hardly be correct because of the Germanic **mazga-*, since this branch seems to preserve the difference between PIE **sg* and **sg^h*. The former yields PGerm. **sk*, cf. PGerm. **maska-* (OE *masc*, *max* n. ‘mesh, net, toil’, E *mesh*, WFr. *mesk* c. ‘id.’) < PIE **mozg-o-* (Toch. A *masäk*, Toch. B *meske* m. ‘joint’, Lith. *māzgas* m. ‘knot’, Latv. *mazgs* m. ‘id.’), see Kroonen 2013: 356.

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