

Avestan *ǰβōrəštar-* and the Indo-European root *√turk-*

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1. The etymological identity of the Vedic god-creator *Tváṣtar-* and Av. *ǰβōrəštar-* m. 'creator' was proposed for the first time by Wackernagel (AiGr. I: 270) and, after the studies by Leumann (1954), Gershevitch (1959: 54ff.) and Mayrhofer (1964), may be considered proven. On the other hand, the usually reconstructed Indo-Iranian proto-form, viz. **tvárštar-* (given, for instance, by all mentioned authors), seems improbable to me.

2. As a matter of fact, Av. *ǰβōrəštar-* rather represents **ǰβərəštar-* /*ǰβr̥štar-*/ (Reichelt 1909: 60, Beekes 1988: 94). In Avestan, the colouring of ə to ō by a preceding or following labial is commonplace, cf. GAv. *mōrəndaṭ* < **mərəndaṭ* /*m̥rndaṭ*/, *garōbiš* < **garəbiš* /*garbiš*/, *dužazōbā* < **-zəbā* < **-zbā* < **-zuā* /*-zuʔāh*/, *ǰβarōždūm* < **ǰβərəždūm* /*ǰβr̥ždvam*/ (for which see below), etc. (Beekes 1988: 34f.), whereas ō stands for /a/ only in some well-defined contexts. We find this ō in *-ōiiV-* for *-aiiV-* (*ōiiā*, *isōiiā*, *axtōiiōi*, *urudōiiatā*, etc., Beekes ibid.: 34), where it may represent the spelling of /ai/, and before the endings *-dūm* (*gūšōdūm*, *mazdāghōdūm*, *siiōdūm*), *-huuā* (*ābaxšōhuuā*), *-duiiē* (*dīdrayžōduiiē*), *-tū* (*vərəziiōtū-cā*, *vātōiiōtu*). Narten (1986: 115) has suggested that ō is here due to the liturgical pronunciation, but this explanation does not account for the distribution. It therefore seems preferable to return to Bartholomae's explanation (GIP: 173), who reckoned these verbal forms among cases of analogical split by the redactors. Finally, in Y. 44.7, 45.9 *cōrəṭ* /*cart*/ and V. 19.28 *uziiōraiti* /*uz-i̯arati*/ ō is probably due to the preceding palatal consonant (Hoffmann – Narten 1989: 40, fn. 9). Since *ǰβōrəštar-* does not show any of these contexts, it seems more probable that ō stands for ə.

In Late Avestan, /*r̥š*/ and /*r̥ž*/ became *arš*, *arž*, e.g. LAv. *arš*, *marždika-* vs. GAv. *ərəš*, *mərəždika-*, etc. (cf. Bartholomae 1898: 261ff.). In Gathic, /*r̥št*/ often appears with the Late Avestan spelling *aršt*, cf. *daršti-* /*dr̥šti-*/ 'sight' (Skt. *dr̥ṣṭi-*), *paršta-* /*pr̥šta-*/ 'question' (Skt. *pr̥ṣṭā-*), *dužuuaršta-* /*vr̥šta-*/, but sometimes *ərəšt* is preserved, cf. *aibī.dərəšta-*, *dərəštā.aēnah-*. Presumably, the redactors of the text did not adjust **ǰβərəštar-* to Late Avestan norms and only recorded the phonetic colouring of the first shwa.

Another argument against the proto-form **ǰβarəštar-* is that *-ārš-* is normally written without a shwa between *r* and *š*. If we take the texts with the best manuscript tradition (Yasna, Vīdēvdād, Vīspērad), we see that *-ārš-* is found without a shwa 216 times (I made use of the electronic text of the Avesta prepared by Dr. S. Gippert-Fritz at Berlin University, which includes all Avestan texts except the Nirangistān), whereas Geldner put the spelling *-arəšt-* only in Y 50.11 *haiǰiiāuuarəštām* (and its repetitions Y 64.7 and Y 65.14) and in the names of the North-Western countries *vouru.barəšti-* and *vouru.jarəšti-* (Vd 19.39, V 10.1) of unclear

etymology. The spelling of the 3sg. -s-aor. *dārəšt* (43.13) and *dōrəšt* (49.2) /*dāršt*/ may be attributed to the final position of the cluster.

The manuscript readings of *haiθiiāuuarəštām* are interesting. In Y 50.11, only L2.3, O2, Dh1, which belong to the Indian Vīdēvdād-Sāde (cf. Geldner: XX), write *uuarəštām*. The same reading is found in J2 and K5, the main mss. of the Indian Pahlavī-Yasna (cf. Geldner: XXXIV), in the citation of the same passage in Y 64.7 and Y 65.14 (plus L2 in Y 65.14). Geldner opted, however, for the reading with ə on the basis of the mss. of the Persian Pahlavī-Yasna. In yet another citation of this passage (Y 0.14), not only the Indian mss., but also Pt4 (Persian Pahlavī-Yasna) have *uuarəštām*, and this time Geldner adopted this reading.

In the Yashts, the spellings -*arəšt*- and -*aršt*- are used indiscriminately by the mss., cf. *darəya.ārəštaēm* (Yt 17.12), *darəya.arəštaēm* (Yt 10.102) beside *darəya.arštaiia* (Yt 10.39), which have been tacitly corrected to -*ršt*- in Bartholomae's dictionary; *ašauua.karəštahe* (Yt 13.105), but -*ršt*- in the same passage in Yt 13.129; *pərəθuuarəštə*, *pərəθuuarəštiš* (Yt 15.48), but *pərəθuuarəštōiš* (Yt 13.101); *dūraēdarəštəma* (Yt 12.7), but -*ršt*- in Yt 1.12. Yt. *dārəšta* and *paiti.dārəšta* have been corrected by Bartholomae to **dārišta*.

In the remaining texts, mss. of which are much less numerous and much less reliable, *uuarəšta*- is occasionally spelled with -*arəšt*-, but, considering the overwhelming majority of *uuarəšta*- spellings, the shwa insertion must be due to the late pronunciation of the -*ršt*- cluster, which found its way into the mss. (cf. on this source of mistakes Hoffmann – Narten 1989: 17f.).

Consequently, the Avestan manuscript tradition points to the distribution: -*aršt*- vs. -*ārəšt*-. Similarly, -*arž*- (< Gathic -*ərəž*-) is normally written without a shwa. The only exceptions are *marəždikāi* Aog. 49, *marəždikāi* Yt 2.2 (although some mss. have *mər(ə)ždikāi*), *marəždikəm* Yt 2.7, and *garəžda* F 21 (which is a citation of Y. 29.1 *gərəždā*). These spellings must also be due to the late pronunciation of the cluster -*ržd*-. For *θbarōždūm* see below.

3. It follows that *θbōrəštar*- can hardly represent **θbarəštar*-, but rather points to **θbərəštar*- /*θbrəštar*-. This reconstruction was recently given by Beekes (1988: 94), who further remarked: "Only the fact that it is the only form in -*tar* with zero grade of the root in Indo-Iranian (even its Sanskrit equivalent *Tvāṣtar*- has full grade) raises some doubt". Now it is by no means certain that Skt. *Tvāṣtar*- contains a full grade of the root and goes back to **tvārəštar*-. We know several cases in Vedic where vocalic *r* loses its consonantal element and becomes *i*, *u*, or *a*, depending on the following vowel, cf. **mr̥hur* [*mər̥hur*] > [*mūr̥hur*] > *múhur*, **śr̥thirā*- [*śər̥thirā*-] > [*śir̥thirā*-] > *sīthirā*-, **dur̥h̥nā*- [*dur̥h̥nā*-] > [*dur̥h̥nā*-] > *durhānā*- (Narten 1982: 140). These forms are not Prakritisms, as is often assumed (e.g., by Bloch 1929), but are the result of dissimilation (Narten ibid.). It is therefore quite possible that *tvāṣtar*- goes back to a formation with zero grade of the root, viz. **tv̥rəštar*-. In the forms where the suffix had full-grade (e.g. acc.sg. **tv̥rəštāram*, voc.sg. **tv̥rəštar*), **tv̥rəštār*- would yield [*tv̥rəštār*] > [*tvārəštār*] > *tvāṣtār*-. 96

4. Accordingly, the combined evidence of Sanskrit and Avestan points to the reconstruction PIIr. $*t\check{u}r\acute{c}-tar$ -. There remains the problem that this is the only formation in $-tar$ - with zero grade in the root. The rather obvious reason for this seems to be the fact that the root \sqrt{turk} - had no full grade in Indo-Iranian. In Sanskrit this verbal root is not attested. In Avestan, the root $\sqrt{\vartheta\beta\bar{o}r\acute{e}s}$ - 'to cut, shape' has the following formations: present $\vartheta\beta\bar{o}r\acute{e}saiti$ ¹ and Gathic 2pl. middle aor. $\vartheta\beta\bar{o}r\acute{e}žd\bar{u}m$.² The latter form is generally regarded as standing for $*\vartheta\beta\bar{o}r\acute{e}žd\bar{u}m$ / $\vartheta\beta\bar{r}\acute{e}ždvam$ / and, because of its apparent full grade, considered to be 2pl. middle of the s -aorist. This analysis contradicts the rule discussed above, viz. that $/ar\acute{z}/$ is spelled without a shwa. It therefore seems more probable that $\vartheta\beta\bar{o}r\acute{e}žd\bar{u}m$ stands for $*\vartheta\beta\bar{o}r\acute{e}žd\bar{u}m$ / $\vartheta\beta\bar{r}\acute{e}ždvam$ / < $*t\check{u}r\acute{c}-d^h\bar{u}em$ and is the 2pl. of the root aorist with zero grade of the root.³ The spelling a for shwa is not unknown in the Avesta and most often occurs between two sibilants, e.g. $du\check{z}az\bar{o}b\bar{a}$ for $*du\check{z}az\bar{o}b\bar{a}$ / $du\check{z}zu\bar{a}h$ /, $i\check{s}asa$ - / $i\check{s}sa$ -, $y\bar{a}i\check{s}az\bar{a}\vartheta\bar{a}$ / $y\bar{a}i\check{s} z\bar{a}\vartheta\bar{a}$ /, etc. (cf. Beekes 1979), but also in the neighbourhood of r , cf. $karapan$ - / $karpan$ -, frequent spellings $zarazd\bar{a}$ - / $zrazd\bar{a}$ -, $star\bar{e}mc\bar{a}$ / $str\bar{e}mc\bar{a}$ /, etc. (cf. Kellens – Pirart 1988: 59f.).

As to nominal derivatives, we find ${}^{(1)}\vartheta\beta\bar{o}r\acute{e}sa$ - in V 8.10 $upa.\vartheta\beta\bar{o}r\acute{e}s\bar{a}n$ acc.pl. 'hole, split' (for the secondary $-n$ see Hoffmann 1970: 189 and fn. 3 = 1975: 276) and in Rivāyat $\vartheta\beta\bar{o}r\acute{e}s\bar{o}$ 'piglet' nom.sg. (Hoffmann 1967: 35 = 1976: 491). Also the LAv. participle ${}^{(1)}\vartheta\beta\bar{a}r\acute{s}ta$ - and ti -derivative ${}^{(1)}\vartheta\beta\bar{a}r\acute{s}ti$ - reflect zero grade of the root. Forms with apparent full grade are only attested in the late texts: N 40 $\vartheta\beta\bar{a}r\acute{e}s\bar{e}sca$ acc.pl.m. 'end, split' (the stem is $\vartheta\beta\bar{a}r\acute{e}sa$ - and not $\vartheta\beta\bar{a}r\acute{e}sa$ h-, as given by Bartholomae, cf. Hoffmann 1970: 277, fn. 5 = 1975: 277), nom.sg. $\vartheta\beta\bar{a}r\acute{s}\bar{o}$ 'id.' in an Avestan citation from the Pahlavī translation of V 2.19, and gen.sg. $auua.\vartheta\beta\bar{a}r\acute{e}sahe$ 'cutting' in F. 25a. Considering the status of the texts where $\vartheta\beta\bar{a}r\acute{e}sa$ - is attested and the fact that ${}^{(1)}\vartheta\beta\bar{o}r\acute{e}sa$ - is found elsewhere, it seems reasonable to emend these three places to ${}^{+}\vartheta\beta\bar{o}r\acute{e}sa$ -.

96

5. Consequently, we may conclude that the Indo-Iranian root $*t\check{u}r\acute{c}$ - is only attested in the zero grade, which may account for the unusual zero grade in $*t\check{u}r\acute{c}tar$ -. Furthermore, cognates of this root outside Indo-Iranian also show zero grades only.

5.1. Greek $\sigma\acute{\alpha}\rho\acute{x}$ 'flesh' reflects $*t\check{u}r\acute{c}$ -. In order to account for unexpected $-\alpha\rho$ - < $*r$ (instead of $-\rho\alpha$ -), Schindler (1972: 34) assumed that somewhere in the paradigm Greek had full grade, which may be reflected in Aeol. and Dor. $\sigma\acute{\upsilon}\rho\acute{x}$ < $*t\check{u}or\acute{c}$ -. This reasoning is not com-

¹ Theoretically, this can be either a present of the *tudāti* type or an *sk*-present (for $*-k\check{s}k$ - > Av. $-s$ - cf. Av. $p\bar{o}r\acute{e}sa$ - 'to ask').

² The forms, including the 3 pl. opt. $upa-\vartheta\beta\bar{o}r\acute{e}sai\bar{i}on$, erroneously given by Bartholomae as an $-aiia$ -present, are conveniently listed in Kellens 1984: 101. According to Bartholomae, $upa-\vartheta\beta\bar{a}r\acute{s}ti$ V 9.2 is 3sg. of the root-present, a recent analogical formation to $\vartheta\beta\bar{a}r\acute{s}ta$ - as $t\bar{a}šti$ to $t\bar{a}šta$ -. Although the syntax of the passage is difficult, it seems more probable that $upa-\vartheta\beta\bar{a}r\acute{s}ti$ is instr. sg. of a *ti*-derivative, attested also in V 14.13.

³ For Av. $\check{z}d$ < PIE $*k\check{d}^h$, \check{g}^h cf. GAv. inf. of nas - 'to attain', $\bar{a}ždii\bar{a}i$ / $\bar{a}žd\bar{a}i$ / < $*H_2nk-d^h\bar{i}oi$, 3sg. inj. middle $\bar{g}ar\acute{e}žd\bar{a}$ 'to complain' < $*g^{(wh)}Rrg^h$ -to, etc.

pling, however. The form σύρξ is only attested in Hesych and in the *Etymologicum Magnum*. Even if we take this information seriously, it is unlikely that σῦρκ- represents **t_uork-*, since this development has no parallels (**o > u* in the neighborhood of labials always involves nasals, cf. νύξ, ὄνυξ, γυμνός, etc.). On the other hand, it seems conceivable that σύρξ reflects **twurk-* < **tw_urk-*, cf. Lesb. πέσσυρες < **k^wetwurV-* < **k^wetwrV-* vs. Att. τέταρες.

As to the vocalization of *r*, I think that it is by no means certain that every Gr. αρ < **r* must necessarily be attributed to the influence of full grade forms. I believe that an important role in the vocalization of the Greek liquidae was played by the initial clusters. An example may clarify the issue. The vocalization -αρ- in σπάρξαν 3pl. aor. 'to wrap', σπάργανα pl. 'swaddling-clothes' can hardly be explained by the full grade attested in σπεῖρον 'piece of cloth' or σπεῖρα 'coil, etc.' because the latter words contain a different root. On the other hand, since the initial cluster σπρ- is unattested in Greek, we may suggest that the vocalization **sprC > *σπραC*, etc. was phonetically impossible and that the sequence **sprC-* regularly yielded **sp_urC-* > Gr. **σπαρC-*. Similarly, vocalization in forms like ἄσφαλτος, σκαλμός, φθάρμα, etc. may be explained by the particular initial clusters.

Since the "normal" vocalization of **t_urk-* (> **t_urk-*) would have given a strange and perhaps impossible initial cluster **twr-*, the shwa was pronounced before the resonant, which regularly yielded **t_urk-* > σαρκ-. Accordingly, the Greek forms can be explained on the basis of the zero grade **t_urk-*.

98

5.2. McCone has recently (1993) argued that OIr. *torc* '(wild) boar', MW *twrch*, MC *torch*, MBr. *tourc* 'h pig' are derivatives of the same root. McCone gives the following semantic justification: "An original sense along the lines "cutter, hacker" for *torc* etc. would be eminently compatible with the boar's notorious talent for tearing and uprooting with his sharp tusks" (p. 292). An additional argument in favour of this etymology can be found in Avestan (*upa-*)*ni-θβərəs-*, which means 'to cut out, to dig out (a pit, hollow)'. This verb appears several times in V 9, where the purification ritual is described in great detail. V 9.6-7 reads: *paoirīm (bitīm, θritīm, tūirīm, puxθəm, xštūm) upa mayəm niθβərəsōiš, pasca hamō aiβi.gaitīm duua ərəθu nismahe, pasca zəmō isaoš aiβi.gaitīm yaθa caθbārō ərəzūuō* 'You should dig the first (second, third, fourth, fifth, sixth) pit: after the beginning of the summer (it must be) two fingers deep, after the beginning of the frosty winter (it must be) four fingers.' The same verb, but without the preverb *upa-*, appears in V 9.9 *θrāiīō aniia maya niθβərəsōiš* 'you should dig three other pits', etc. These undep hollows, pits were presumably not really dug out, but rather cut out, which may account for the use of the root *θβərəs-*. Important is also the Avestan word *θβərəsō* 'piglet', if this word is not invented by the scribe (as suggested by Hoffmann 1967: 35 = 1976: 491).

McCone reconstructs for the Celtic words **t_uorkos*, but a form with zero grade (**turkos*) is preferable in view of OIr. gen.sg. *tuirc* (TBC² 466, etc.), acc.pl. *turcu* (Thes. ii 293.4, etc.) because clusters of the *rC* type normally resist raising (cf. Thurneysen 1946: 47f.), but allow

lowering. The British forms reflect Proto-Br. **turch-*. Also Av. *ǰβərəsō* 'piglet' points to zero grade in this word. For the vocalization of the Celtic word cf. OIr. *Olc* NPr., *olc*, gen. *uilc* 'bad' < **ulko-* < PIE **ulk^{wo}-* (see McCone 1985). A similar vocalization may explain OIr. *flaith* f. (later m.) 'sovereignty, rule; lord, prince', MW. *gwlad* f. 'land, territory' < **ūlati-* < **ulati-* < **ulHti-*, where the initial *u-* must have been vocalic at the time of the vocalization of the laryngeals.

6. Since the root **turk-* only appears in the zero grade in Indo-Iranian, Greek and Celtic, we may assume that this was also the case in Proto-Indo-European. This result has important consequences for the problem of the metathesis of IE **CurC* to **CruC*. It has often been assumed (cf. most recently Mayrhofer 1986: 161f.) that **CurC* yielded **CruC* in PIE already. The material presented by Mayrhofer comprises the following items:

(1). Compounds of the word for 'four': **k^wetur(C)-* > **k^wetru-* in Av. *caθru^o*, Gall. *petru^o* 99 (e.g. *Petru-corii*), cf. also Lat. *quadru(r)*, MW *pedry^o*, Gr. *τρου-φάλεια* '(helmet) with four φάλοι'.

(2). Indo-Iranian **snā^urt* 'sinew' (cf. Av. *snāuuarə*) > **snārut* > Pāli *nhāru* vs. Skt. *snāvan-* 'id.'.

This Pāli form can hardly testify to a PIE sound law, however. Tedesco, who discussed the Sanskrit and Middle Indic words for 'sinew', also mentions (1957: 185) Pāli *pāruta-* < Skt. *prā^vṛta-*, with a similar development.

(3). **drāk^ur* (#) 'tear' > **d[r]ākru* (Gr. *δάκρυ*, German *Zähre*), but in the oblique cases **drāk^un(C)* > **drākun-* (OHG *trahin*) (Eichner).

The OHG form does not prove heteroclitic inflection for this word in PIE. Beside this form with *-n-*, we also find MHG *traher*, *treher*, reflecting PGm. **trahru-*, and OHG *zah(h)ar* (related to OE *tæh(h)er*, etc.), reflecting PGm. **tahru-*. Most probably, OHG *trahin*, OS (pl.) *trahni* go back to **trahnu-*, which may be due to dialectal dissimilation of PGm. **trahru-* (cf. Franck – van Wijk 1912: 705), rather than represent the only vestige of a PIE heteroclitic stem. PGm. **tahru-* then shows dissimilation of the first *r*. For the IE reconstruction of this word see now Kortlandt 1985.

There is yet another reason to doubt heteroclitic inflection of this word. If we postulate a regular metathesis of the word-final **-ur* to **-ru*, we have to account for the nominative of heteroclitic neuters in **-ur*, which form the oblique cases as proterodynamic *n*-stems (gen.sg. **-uens*, etc., cf. Hitt. *pah^hur*, *pah^huens*). A natural explanation would be to assume that this nominative was reshaped on the basis of other *r/n*-neuters. If, then, the word for 'tear' was heteroclitic, why was not its nominative reshaped? It seems therefore more promising for the theory of the PIE metathesis **-ur* > **-ru* to take the word for 'tear' as a non-heteroclitic neuter, like the word for 'beard', which we shall discuss presently.

(4). **smókūr* (#, C-) 'beard' > **smókru* (Skt. *śmáśru*), but Hitt. *zama[n]kur* "ist aus Formen mit vokalisch anlautender Endung restituiert" (Eichner). Hitt. *zamankur* is probably an *r*-stem, as can be inferred from the derivative *šamankurant-* 'with a beard', and although the oblique cases of this word are unattested, one would expect gen.sg. **zamankuras*, etc., so that the postulated Hittite nom.sg. in *-ru* could have been restored on the basis of the oblique cases. Since in the other IE languages the type of non-heteroclititic neuters in **-ur* had become obsolete, there was no model for reshaping the nominative, which may account for the preserved metathesized form **-ru*.

(5). **suekūr_{h2}*- 'mother-in-law' (cf. Skt. *śváśura-* 'father-in-law') > **suekruh₂*- (Skt. *śváśrū-*, OCS *svekry*, OHG *swigar*) (Brugmann Grundriss I: 260).

(6). Skt. *á-hruta-* 'not going astray', *ví-hruta-* 'crooked', *hrút-* 'ruggedness', derived from *hvarate* (cf. about this metathesis recently Hoffmann 1980). Mayrhofer also mentions Skt. *dhrúti-* 'mistake, delusion' as being cognate with *dhvárati* 'to violate', with a reference to Hoffmann, who, however, explicitly pleads against this connection in his article.

100

As to Skt. *á-hruta-*, it can be demonstrated that the metathesis is recent. The zero grade forms of Skt. *hvarate* show a remarkable distribution in Vedic (Hoffmann 1980: 90f): we normally find *hru-* (*áhruta-*, *víhruta-*, *ávihruta-*, *áhruta-*, *hrút-*, *abhihrút-*, *vihrút-*, *avahrut-*, *abhihruti-*, *víhruṇāti*), but *hvr-* after the preverb *pári* (*áparihvṛta-*, *parihvṛt-*, *párihvṛti-*; the only exception is RV 6.4.5 *parihrút-*, probably due to *hrút-* in the same *pāda*). Hoffmann did not try to account for this distribution, but the fact that *hvr-* is found after *pári* can, in my opinion, only be explained if we assume that *r* of *pári* "prevented" the metathesis, which then is not of PIE date, but fairly recent, probably Vedic only.

(7). Gr. *ὀτρύνω* 'to stir up' as derived from **o-tūr-s* > **otrus*, cf. Skt. *tvárate* 'to hurry' (I would rather think of PIE **h₃tuer-*). Here, too, we cannot be sure that (if the etymology is correct) the metathesis is of IE date.

Brugmann's list in the Grundriss (I: 260f.) does not offer more reliable material, so we must consider these seven items as our starting point. The question is whether the metathesis is a sound law of PIE date or, as it was put by Hoffmann 1980: 95, "handelt es sich bei der Mehrzahl der Beispiele mit *ru/lu* für *ur/ul* wohl nicht um ein wirkliches Lautgesetz, sondern eher um eine phonetische Spielform, die auch einzelsprachlich bzw. in der Einzelsprache dialektal eintreten konnte".

The material presented above is of uneven value. As we have seen above, Pāli *nhāru* (No. 2) and Gr. *ὀτρύνω* (No. 7) are only attested in one language and, in view of the fact that the groups *ru*, *ur* are often unstable and liable to metathesis (cf. Latin *nervus*, *parvus*, etc. < **-vr-* or Skt. *arvāne-* < **-vr-*, *jívrī-* < *jírvi-*, Pinault 1987-88: 336ff), these forms cannot testify to a PIE sound law. Metathesis in Skt. *á-hruta-* (No. 6) must be recent. All other instances concern metathesis in word-final position or, at least, in the final syllable (Gr. *ὀτρύνω* if derived from

* $\vartheta\tau\rho\upsilon\varsigma$ also shows metathesis in this position). If we combine this observation with the absence of metathesis in the root $*turk$ -, we may tentatively suggest that in PIE the metathesis $*-ur-$ > $*-ru-$ was phonetically regular in the final syllable only.⁴

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101

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