Vedic nouns of the rétas- ‘stream; semen’ type and several related problems of Indo-European morphology

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Abstract. The present article is dedicated to the historical analysis of the formant -t- appearing in the Sanskrit neuter s-stem nouns srótas- ‘stream’, rétas- ‘stream; (male) semen’, and †vétaś- ‘reed; stick’, as well as the structure and derivation of these nouns. Already Hermann Hirt already proposed that the formant -t- in these nouns was related to the Indo-European t-stems, but alternative interpretations have been put forward as well. Among the existing theories regarding the origin of the formant -t- in these s-stems, Hirt’s theory appears to be the most plausible. A different interpretation regarding the structure and development of their root is proposed in this article, however. Hirt claimed that the normal grade of the root in these nouns was inherited from Indo-European, but an analysis of data suggests that late Indo-European t-stems built to roots of this structure must have had zero grade. The attested full grade must have been introduced only when the reformed roots *srut-, *rit- and *wit- (← **R-t-) were secondarily re-used to build new s-stem nouns.

1. Sanskrit possessed three neuter s-stems of a slightly unusual shape. Two of them are attested in the Rigveda, cf. rétas- ‘stream’ and ‘semen’ (> 30x; non-compounded) and srótas- ‘stream’ (RV 1.51.15c and 1.95.10a), whereas the thematized vetas-á- ‘rattan, reed, stick’ (RV 4.58.5d), the vṛddhi-formation vaitasá- ‘made of reed; stick; membrum virile’ (RV 10.95.4d and 10.95.5a), and the compound vetas-vánt- ‘filled with reeds’ (Pāṇini) suggest the earlier existence of an s-stem *vétaś-, which, based on the semantics of its derivatives and its own root etymology, most likely meant ‘reed’ or ‘stick’.

The three simplex s-stems are ultimately built to the verbal roots √ri-, √sru- ‘flow’, and the Indo-European verbal root *yeih₁-/*yjeh₁ - ‘twist, plait’, but all three have an unexpected shape because regular neuter s-stems built to these roots should have become *ráy-as-, *sráv-as- resp. *váy-as-. From the shape of the attested Sanskrit forms, one can reconstruct their immediate ancestors as *rai-t-as-, *srau-t-as-, and *wai-t-as-, in all of which the consonant t has been inserted between the root and the normal s-stem suffix -as- (< *e/os-). This consonant t also occurs in the derivatives vetasá- and vaisasá- shown above.

2. The history of this intrusive t has been explained in several different ways. In Altindische Grammatik (II, 2.615f.), the nouns srótas- etc. were interpreted as tas-
derivatives, and the suffix -tas- considered to be inherited from the protolanguage, since several nouns reflecting formations of the same kind are attested in other Indo-European languages, cf. Greek χῆτος 'need, want' (gen. sg. -εος), κλείτος 'slope', Lithuanian sraũtas 'torrent' (→ o-st.). An alternative interpretation was proposed by Hirt (1913, 276f.), who analyzed the suffix -tas- as the suffix -t- combined with the s-stem suffix -as- (< IE *-elos-). A still different analysis was put forward by Manessy-Guitton (1963: 29f.). She considered the formant t of the noun *vétas- inherited, but she thought that in the nouns rétas- and srótas-, the consonant t was introduced by analogy, respectively from the root noun rít- 'stream' or 'flowing' (hapax; RV 6.57.4a), and the enlarged °-sru-t- that had originated in compounds.

The analysis proposed in AiGr is problematic despite the examples adduced, because nouns built with such a suffix are, on the one hand, extremely few, and, on the other hand, mostly confined to a single language. Moreover, since they are the only examples, their analysis as reflexes of some ancient morphological class of ‘tes-’ or ‘tos-stems’ becomes not particularly attractive. It should also be noted that the Greek noun κλείτος may not reflect anything old. It is attested once in the plural form κλείτεα, and may simply be a variant of κλίτος ‘id.’ (Lycophron +), influenced by the vocalism of the tu-stem κλειτύς ‘slope, hillside’ (Homer +).

Also Manessy-Guitton’s interpretation contains problems: first, other Sanskrit s-stems which do not have any -t- inserted speak against analogy, even though respective enlarged root nouns are attested as well, cf. Skt. śráv-as- ‘fame’ (not *śrót-as-) beside the enlarged °-sru-t-, or hvár-as- ‘crookedness’ (not *hvárt-as-, *hört-as-vel sim.) beside the t-stem hrú-t-. In addition to this, no comparable source of analogy can be indicated for the Greek s-stem χῆτος, or for Lith. sraũtas ‘torrent’ (< *srou-), which originally may have been an s-stem, comparable to Skt. srótas-.

Unlike the two interpretations mentioned above, Hirt’s analysis is much simpler, because aside from the element t, the formations rétas-, srótas- and *vétas- look like simple neuter s-stems. If Hirt’s analysis is adopted, it only becomes necessary to explain the function and origin of the intrusive t.

3. Hirt only considered the nouns rét-as- and srót-as- in his study, interpreting them as secondary s-stems built to older—but not directly attested—t-stems *sro-t-

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1 See Manessy-Guitton (1963, 29) and LIV695. The reflexes of the verbal root *yeih₁-/yieh₁-do occur in the verbal system of Vedic Sanskrit, although the meaning of the root has secondarily developed into ‘wrap, cover’, cf. vyáyati ‘wrap, envelop; cover’ (pr.), ávyat (aor.), viídā- (perf. ptc.), etc. However, whereas the noun *vétas- requires a reconstruction of *yeih₁-, the verbal forms require a metathesized *yieh₁- (as for laryngeal issues, see LIV695). Therefore, even though the noun *vétas- and the verbal forms share the same original root, from the point of view of Sanskrit, they are to be interpreted as independent formations.
and *re-t-. Hirt claimed that these two t-stems reflected a very archaic Indo-European ablaut, exhibiting an otherwise rarely attested full grade of the root (in Indo-European terms, *reit- resp. *sreut-) (Hirt 1913).

The interpretation of the element -t- in these Sanskrit formations as an ancient formant (i.e., a historical suffix) is quite attractive. Its ancient character can be well illustrated by the root/stem vēt- because a comparable reformed root also occurs in other languages, cf. Old Icelandic víðir ‘willow’ (masc.; < Proto-Germanic *wīðr-ija- < *y[e]ih₁-t-), Old High German wīda ‘id.’ (fem.; < PGmc. *wīþ- < *y[e]ih₁-t-), probably also Skt. vēt-ra- ‘reed’ (Kauśika sūtra), etc. In all these formations, t behaves as if it were part of the root, but from a historical point of view, it may be more plausible to interpret it as an old suffix that would have become attached to the root via reinterpretation of the morphemic boundaries. One reason for such an analysis is that the root *yəih₁t- is otherwise entirely unknown. If -t- is interpreted as an old suffix, however, all the nouns mentioned earlier can be plausibly connected with the well attested and semantically closely related root *yəih₁t-/*yəiḥ₁.

In addition the consonant t in rétas- must be old, too, as it also occurs in the historically related root formation rīt- ‘stream’ or ‘flowing’, itself a very old derivative primary t-stem (for a more detailed discussion, see section 8). As mentioned above in section 2, there is no compelling reason to assume that the t of rétas- is analogical after rīt-.

It may be more difficult to find comparable support for the t of srótas-, since the Lithuanian noun srautas may or may not reflect an older s-stem (cf. fn. 3 above). However, both because srótas- is a very archaic form and because of its structural similarity to rétas- and vētas-, it will be assumed here that srótas- was built in the same way as the other two.

4. The three s-stems srótas-, rétas-, and *vētas- as a group might be compared with another irregular but clearly archaic Indo-Iranian formation exhibiting an intrusive t, viz. Proto-Indo-Iranian *pṛt-anā- ‘battle’ (> Ved. pṛtanā-, Av. paśanā-). The stem *pṛt-anā- is an anā-formation built to the root pṛt- (cf. Ved. pṛt- ‘battle’), which itself is a reinterpreted t-stem, **pṛt-t- (originally ‘beating’, cf. IE *per- ‘beat’).

In both cases, we have secondary derivatives built to a more archaic t-stem, secondarily reinterpreted as a root. Schematically, the derivation can be represented

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2 For the discussion of the semantics, see section 7 below.

3 AiGr II, 2.615; Kazlauskas (1968, 285). Kazlauskas compares Skt. srótas- with the Lithuanian noun srautas (< *sreu-), but different analyses also exist, e.g., Skardžius (1941, 321) assumes a to-formation in srautas, whereas Fraenkel (1962–1965, 888) compares Lith. srautas with Skt. srota- (thematic or thematized formation).
in the following way: **pṛ-t- ‘battle’ (derivative t-stem) → *pṛt- (root) → *pṛt-anā- ‘id.’ resp. **srau-t- ‘stream’ (deriv. t-stem) → *sraut- (root) → *sraut-as- ‘id.’.

The roots pṛt- and sraut- differ in their ablaut grade, viz., whereas the root *pṛt- in *pṛt-anā- is in the zero grade, the roots of *sraut-as-, *rait-as-, and *wait-as- are in the full grade. This difference is of certain significance, and I will return to it in section 6 below.

5. T-stems are a well established Indo-European morphological class of nouns, and they have been studied in a systematic way in a number of works. Although the clearest reflexes of t-stems can be observed only in the earliest Indo-European languages—such as Hittite, Vedic Sanskrit, Avestan, Greek, and Latin—a number of t-stem reflexes can also be found in other Indo-European dialects.

Over the course of time, Indo-European t-stems normally underwent morphological reformation, usually merging with more productive nominal classes, e.g., i-stems (cf. Lith. naktis, gen. -iěs ‘night’ < nakt-i- ← *nok-ti- ← *nokt-), n-stems (cf. Proto-Germanic *nef-an- ‘nephew, grandson’ ← *nep-af- < IE *nep-o-), thematic stems (cf. New Hittite ša-aš-ta-aš /sast-as/ [KUB XVI 40 V 5; NH/NH] ← Old Hittite ša-aš-Za- /sas-t-s/ ‘rest’ [nom. sg.; KUB XXXIII 8 III 9; OH/NH]; see Rieken 1999, 130), etc. These reformations greatly diminished the original numbers of pure t-stems, and in most dialects t-stems eventually utterly dissolved in more productive morphological classes.

In Indo-Iranian, t-stems for the most part became absorbed by root nouns, adopting their accentuation and ablaut patterns. Over the course of time, however, t-stems exerted some influence on historical root nouns, too, namely in such a way that all root nouns ending in short vowels (i, u, r) acquired an ‘empty’ t formant (← derivative suffix -t-). This t-extension rule, which goes back to the Proto-Indo-Iranian period, has greatly distorted the original state of affairs, both making the study of Indo-Iranian t-stems a very difficult task and causing a large number of theories about its origin to appear. By means of internal reconstruction and external

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4 Etymologically related forms exhibiting the consonant t are abundant in Indo-European (see various examples in IEW1122), but not all of them are equally clear. Whereas in several instances we probably have original ti- or tu-stems, cf. Gk. ἱτέα ‘willow’ (< ἱτεϝά < *ih1-teu-; cf. Hesychian γιτέα /ϝιτεα/), Latin vitis ‘id.’ (< *iyih-ti-), in several other instances it is difficult to tell whether one is dealing with reformed original t-stems or with original ti- or tu-stems, cf. Lith. vytis ‘twig’, Old Irish feith ‘fibra’ (< *ti- or *ti- or *ti-i-), Old Church Slavic větvь ‘twig’ (< *voi[h1]-t-y-i- or *t-y-i-), Gk. οἶσος ‘withy’, Old Prussian witwan ‘willow’ (< *t-y-o- or *t-y-o-). A special problem is posited by Avestan vāēiti- ‘willow’, which reflects the full grade, otherwise extremely rare among ti-stems with comparable root structure (for a more detailed discussion of the original Indo-European ablaut of ti-stems see Vine 2004).

5 There exist several etymologies for the Indo-Iranian noun *pṛt- and its derivative *pṛt-anā-
comparison however, in certain instances it is possible to demonstrate that some of the Sanskrit and Avestan t-stem root nouns were true t-stems at earlier stages. Among these formations, the most clear historical derivative t-stems are Ved. nákt- ‘night’, rít- ‘stream’ or ‘streaming’, dyút- ‘shining, splendour, ray of light’, pít- ‘battle’ and Young Avestan pǝrǝt- ‘id.’.

The Indic roots srot-, vet- and ret- may derive from original t-stems *srau-t-, *wai-t- resp. *rai-t- as well, and their structure would have been the same as that of the genuine Indo-European derivative t-stems. Originally, the ancestors of these three t-stems would have been abstract nouns, denoting the action expressed by the underlying verbal root.

Building secondary s-stem nouns srótas-, †vétas-, and rétas- from the already existing t-stems was by no means abnormal, since s-stems were very productive in Sanskrit, and they were commonly built even though the language already possessed other derivatives of the same verbal root, cf. Ved. dvéṣas- ‘hatred’ (< *dyeis-<es-)) beside the root noun dvíṣ- ‘id.’ (< *dùis-), further péśas- ‘shape; form’ beside píś- ‘ornament, decoration’, śocís- ‘glow’ beside súc- ‘id.’, etc.

6. Although from the derivational point of view, the interpretation of the stems srótas-, rétas-, and *vétas- as reformed t-stems is plausible, there arises a problem connected to their ablaut. Whereas these three nouns display the full grade in their roots, historical t-stems built to roots of the same CeR(C) structure practically always have a secondarily introduced zero grade, cf. lat. grātēs ‘gratitude’ (< *gHr-t- ← *gur/erH-t-), New Hittite ka-rī-iz ‘flood’ (< *gri-t-; KUB VIII 27 lk. Rd. a 3, NH/NH beside the Old Hittite archaism ge-re-e-za ‘id.’ < *groi-t-; KUB XXXIV 10, 10’ OH/NH), Greek λî-τ-α ‘linen cloth’ (acc. sg.; < *li/t-t- [< *lo/eiH-t-]; Hom. Iliad, VIII.441; Odyssey, I.130). Hirt’s suggestion that the Indic s-stems srótas- and rétas-might have preserved a more archaic ablaut grade is implausible for two reasons: first, this leaves the zero grade of pít- and rít- unexplained. Second, the introduction of the zero grade in root nouns, t-stems, and even ti-stems built to CeR(C) roots is

‘battle’. According to an old etymology presented by J. Pokorny, I-Ir. *pēt-anā- is somehow related to Welsh Prydain ‘Britain’ and Greek Πητανῆς νῆσος ‘id.’ (1940, 115). Pokorny later switched to another explanation, however, proposing a connection to the verbal root *per- ‘beat’ (IEW 818). E.P. Hamp supposed the root of I-Ir. *pēt- should rather be associated with IE *per- ‘cross, travel over’ (1982, 64). Various problems related to Pokorny’s original interpretation, as well as Hamp’s more recent analysis, are discussed in more detail by Vijunas (2006, 98ff). Here it will be sufficient to note that Pokorny’s connection of I-Ir. *pēt- to the root *per- ‘beat’—which has been adopted in this article—is the most plausible one on semantic grounds.

6 The earliest attempt to systematize the Indo-European t-stems can be found in Rieken (1999). Subsequent works include Irslinger (2002), Nussbaum (2004), and Vijunas (2006).
followed with a high degree of regularity in multiple Indo-European dialects, and in most instances goes back to prehistoric times. Therefore, between the zero grade of *pṛt-, rīt-, etc. on the one hand and the full grade of *srōt-, rēt-, and *vēt- on the other hand, it is the full grade that appears abnormal.

An easy and more plausible way to account for the full grade in the roots *srōt-, rēt-, and vēt- is to assume that they acquired this full grade once they were employed to build the s-stems *srōtas-, rētas-, and vētas-. It is normal for s-stems to have roots in the full grade, cf. Ved. tāpas- ‘heat’ (< *tēp-es- ~ Lat. tepor ‘warmth’), vācas- ‘speech, word’ (< *yēkʰ-es- ~ Gk. ἔπος ‘word’), etc. Even in those instances when the underlying root has the CeR(C) structure, unlike root nouns, s-stems commonly have the full grade, cf. Ved. dvēs-as- ‘hated’ (< IE *dyeis-), ój-as- ‘strength’ (< *h₂eug-), pēs-as- ‘ornament’ (< *peik-), śrāv-as- ‘fame’ (< *k₂leu-), etc. The development of the nouns srōtās-, rētas-, and vētas- should therefore probably be reconstructed in the following way (using srōtās- as an example): *srōu-t-/*srēu-t- (t-stem) → *sru-t- → *srut- (root noun) → *sraut-as- (s-stem) > srōtās-.

7. Finally, a few words will be said about the Vedic t-stem rīt-. If it can be proven that this formation is old and its t is a genuine suffix from the historical point of view, this can be directly applied to the t of the closely related noun rētas-, too.

The t-stem rīt- is attested in the fourth stanza of the Rigvedic hymn 6.57 to Indra and Pūsan, cf. yād índro ánayad rītō mahīr āpó vṛṣantamaḥ | tátra pūṣabhavat sáca ‘when the most vigorous Indra led the […] great waters, Pūsan came along’. Syntactically, the form rīt-as is a plural accusative, and is the direct object of the verb ánayad.

The root of the t-stem rīt- has been identified as rī/-rī- ‘flow’, and this substantive has been interpreted in two different ways. In his translation of the Rigveda, K.F. Geldner translated it as a participle, ‘flowing’, cf. ‘Als Indra, der Bullenhafteste, die strömenden großen Gewässer (in ihre Bahnen) leitete, dar war Pūsan darbei’ (Geldner, 2: 159). A similar interpretation of rīt- can be found in a number of dictionaries, cf. rī-t- ‘etwa entrinnend’ in the Sanskrit dictionary by O. von Böhtlingk and R. Roth (1855–75, 6: 347), as well as ‘running, flowing’ in Monier Monier-Williams’ dictionary (1899, 880c), ‘rinnend’ in H. Grassmann’s Rigvedic dictionary (1872, 1164), and ‘rinnend, strömend’ in EW Aia II.437. The word-form rītas has also been translated as ‘coulantes’ (‘flowing’) by L. Renou (1966, 151) and ‘protočnyje’ (‘id.’) by T.Ja. Elizarenkova (1995, 157). However, unlike others, R.T.H. Griffith...
interpreted the form *rítas* as a noun, translating it as ‘stream’, cf. ‘When Indra, wondrous strong, brought down the streams, the mighty waterfloods, Pusan was standing by his side’ (1896–1897, 2: 627).

Which of the two interpretations is preferable?

If one chooses the agentive meaning ‘flowing’, the *t*-stem *rí-t-* becomes semantically similar to two old *t*-stem nouns attested in Homeric Greek, viz. ṣó̂óζ ‘hero’ (stem ṣó̂ó-τ- < IE *bhoh₂-t-) and πλάζ ‘swimmer; mullet’ (πλά-τ- < *ploh₃-t-), both of which are unusual in that at an earlier stage of development, they must have had agentive meaning, viz. ‘shiner, the shining one’ resp. ‘swimmer, the swimming one’. Unlike these two Greek nouns, other inherited *t*-stems originally formed verbal abstracts (action nouns).

A simple way to solve this problem would be to say that Ved. *rí-t-* behaved like ṣó̂óζ and πλάζ, except that whereas the two Greek nouns eventually became fully nominalized, Ved. *rí-t-* remained participial or adjectival in character. This is semantically possible, but such an analysis creates a different problem, namely that in such a case *rí-t-* would be the only non-compound *t*-stem of this type, i.e. it would be the only non-compound Sanskrit adjectival/participial *t*-stem.

It is perhaps more plausible to interpret *rí-t-* as a noun meaning ‘stream’ as Griffith did. Although, when *rí-t-* is translated in this way, one gets an apposition, cf. ‘…streams, the great waters…’ as opposed to Geldner’s ‘…the streaming great waters…’, this is not really a problem, since apposition is not uncommon in Rigveda, cf. the following passages: tásmā āpo ghṛṭám arṣanti síndhavas ‘to him the rivers, the waters stream ghee’ (RV 1.125.5c); āpo arṣanti síndhavah ‘the waters, the rivers stream’ (RV 9.2.4b and 9.66.13b), etc.

The interpretation of *rí-t-* as a noun meaning ‘stream’ is much more attractive from the historical point of view, since in such a case, this noun can be analyzed as a concretized old action noun, ‘flowing’. The concretization of the original verbal abstract ‘flowing’ to ‘stream’ is quite a banal change.

8. There are good reasons to believe that the noun *rít-* was formed at a fairly early stage. One of the reasons for this claim is the shortness of the vowel *i*, which is not regular, because the underlying verbal root is normally reconstructed as *h₃réiH-

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9 Nominal formations with CeR(C) roots in the zero grade are abundant in Indo-European, and some are clearly old, cf. Skt. gír- ‘praise’ resp. Av. gar- ‘welcome’ (< *gʰiH-), Lat. grát- ‘gratitude’ (<*gʰiH-t-). Other formations of the same kind include Ved. ma-t-, Lith. mîtis ‘thought’, Lat. ment- ‘mind’ (< *męt-t- ← **męn-ti-); Ved. mṛ-ṭi- ‘death’ (← **męt-ti-, also mṛ-tú- ‘id.’ < mṛ-ti- + -u-), Lith. mîtis and Lat. mort- ‘id.’, La. sitiis ‘thirst’ (< *gʰhdi-ṭi- ~ IE *dhgʰthei- ‘perish’); Oic. burdr ‘carrying; birth’, Gothic ga-baurþs ‘birth’ (< *bhṛ-ti- ← **bhér-ti-); etc. For a detailed discussion of ablaut distribution in Indo-European *ti*-stems and related matters, see Vine (2004).
‘flow’, and the reflexes of a root-final laryngeal can be clearly seen in the following forms: Ved. *rināti ‘flow’ (< *h₁rī-ne-H-ti), rīyate ‘id.’ (< virtual *h₁rīH-jē-), Gk. ὀϱίννω (Lesbian) and ὀϱῑʹνω (Attic) ‘flow’, Gothic rinnan ‘run’ (< *h₁rī-n-H-) etc. (LIV.305). If the Vedic root noun rīt- had been built to the zero grade of this root, it should have become rīt- (cf. also Ved. rī-tī- ‘course’ < *h₁rīH-ti-).

The most simple way to explain the shortness of the root vowel is to reconstruct an original ó/é acrostatic paradigm for rīt-, in which probably both laryngeals would have been lost due to Saussure’s law, cf. *roH-t- > *roi-t-. The weak stem would have been analogically remade into *rei-t-. As the original ó/é ablaut pattern would have been regularly remade into ó/z, the root of the weak stem would have naturally become *ri-t-.

As to whether this acrostatic noun would have been a root noun or a derivative t-stem, it would not be possible to tell based solely on the internal reconstruction of rīt-, since the acrostatic pattern is attested both among root nouns and derivative t-stems. However, since the t of rétas- is most probably old, and since rīt- itself must have been built before the operation of Saussure’s law, the reconstruction of an old derivative t-stem becomes quite attractive.

References

10 Exceptions occur, cf. Ved. ुैस- ‘dawn’ (fem.; ← IE *h₂eus-os-), ौैस- ‘breast’ (neut.; < *[h₁]ur-es-), ॉू- ‘quickness’ (< *gu[H]-es-), etc.
11 The noun φώϛ has been interpreted as an agentive formation by Peters (1993, 104–7), and later his interpretation was adopted by Janda (2002, 246). For a semantic analysis of πλώϛ and various related problems, see Vijūnas (2006, 66ff).

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