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', $r\acute{e}tas$ - 'stream; (male) semen', and † $v\acute{e}tas$ - '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-(\leftarrow **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 vrddhi-formation *vaitasá*- 'made of reed; stick; membrum virile' (RV 10.95.4d and 10.95.5a), and the compound *vetas-vant*- 'filled with reeds' (Pāṇini) suggest the earlier existence of an *s*-stem **vétas*-, which, based on the semantics of its derivatives and its own root etymology, most likely meant 'reed' or 'stick'.

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), κλεῖτος 'slope', Lithuanian sraũtas 'torrent' ($\rightarrow o$ -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 *-e/os-). A still different analysis was put forward by Manessy-Guitton (1963: 29f.). She considered the formant t of the noun * $v\acute{e}tas$ - inherited, but she thought that in the nouns $r\acute{e}tas$ - and $sr\acute{o}tas$ -, the consonant t was introduced by analogy, respectively from the root noun $r\acute{t}t$ - '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 $\pi\lambda\epsilon$ may not reflect anything old. It is attested once in the plural form $\pi\lambda\epsilon$ and may simply be a variant of $\pi\lambda$ (Lycophron +), influenced by the vocalism of the *tu*-stem $\pi\lambda\epsilon$ to '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. \acute{s} r \acute{a} v-as- 'fame' (not * \acute{s} r \acute{o} t-as-) beside the enlarged °- \acute{s} ru-t-, or \acute{h} v \acute{a} r-as- 'crookedness' (not * \acute{h} v \acute{a} rt-as-, * \acute{h} o \acute{o} rt-as-vel sim.) beside the \emph{t} -stem \emph{h} r \acute{u} -t-. In addition to this, no comparable source of analogy can be indicated for the Greek \emph{s} -stem χ $\~{\eta}$ to ς , or for Lith. \emph{s} r $\~{a}$ $\~{u}$ torrent' (< * \emph{s} ro \emph{v} -), which originally may have been an \emph{s} -stem, comparable to Skt. \emph{s} r \acute{o} tas-.

Unlike the two interpretations mentioned above, Hirt's analysis is much simpler, because aside from the element t, the formations $r\acute{e}tas$ -, $sr\acute{o}tas$ - and $*v\acute{e}tas$ - 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-*

¹ See Manessy-Guitton (1963, 29) and LIV.695. The reflexes of the verbal root $*ueih_1-/*u\underline{i}eh_1$ -do occur in the verbal system of Vedic Sanskrit, although the meaning of the root has secondarily developed into 'wrap, cover', cf. $vy\dot{a}yati$ 'wrap, envelop; cover' (pr.), $\dot{a}vyat$ (aor.), $v\bar{t}\dot{a}$ - (perf. ptc.), etc. However, whereas the noun * $v\dot{e}tas$ - requires a reconstruction of * $ueih_1$ -, the verbal forms require a metathesized * $u\underline{i}eh_1$ - (as for laryngeal issues, see LIV.695). Therefore, even though the noun * $v\dot{e}tas$ - 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 $v\acute{e}t$ - because a comparable reformed root also occurs in other languages, cf. Old Icelandic $v\acute{t}\acute{o}ir$ 'willow' (masc.; < Proto-Germanic *wid/p-ija- < $*u[e]ih_1$ -t-), Old High German wida 'id.' (fem.; < PGmc. *wip- < $*u[e]ih_1$ -t-), probably also Skt. $v\acute{e}t$ -ra- 'reed' ($Kau\acute{s}ika\ s\~{u}tra$), etc.² 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 $*ueih_1t$ - 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 $*ueih_1$ -/ $*ueih_1$ -.

In addition the consonant t in $r\acute{e}tas$ - must be old, too, as it also occurs in the historically related root formation $r\acute{t}t$ - '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 $r\acute{e}tas$ - is analogical after $r\acute{t}t$ -.

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 *vétas*-, 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 **vétas*- as a group might be compared with another irregular but clearly archaic Indo-Iranian formation exhibiting an intrusive t, viz. Proto-Indo-Iranian *prt- $an\bar{a}$ - 'battle' (> Ved. prt- $an\bar{a}$ -, Av. part- $an\bar{a}$ -). The stem *prt- $an\bar{a}$ - is an $an\bar{a}$ -formation built to the root prt- (cf. Ved. prt- 'battle'), which itself is a reinterpreted t-stem, *pr-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

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 *sriautas* (< **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: **pr-t- 'battle' (derivative t-stem) \rightarrow *prt- (root) \rightarrow *prt- $an\bar{a}$ 'id.' resp. **srau-t- 'stream' (deriv. t-stem) \rightarrow *sraut- (root) \rightarrow *sraut-as- 'id.'.

The roots prt- and sraut- differ in their ablaut grade, viz., whereas the root *prt-in *prt- $an\bar{a}$ - 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.⁴ 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. $-i\tilde{e}s$ 'night' $< nakt-i- \leftarrow *nak-ti- \leftarrow *nak-ti- \rightarrow *nak-ti-$

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 (\leftarrow 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. t- By means of internal reconstruction and external

⁵ There exist several etymologies for the Indo-Iranian noun * p_{i} t- and its derivative * p_{i} t-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', *pŕt*- 'battle' and Young Avestan *pərət*- 'id.'.⁶

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.

6. Although from the derivational point of view, the interpretation of the stems sr ot as-, r ot as-, and v ot as- 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. gr ot at as 'gratitude' (v ot as-v ot as- v o

^{&#}x27;battle'. According to an old etymology presented by J. Pokorny, I-Ir. *pṛt-anā- is somehow related to Welsh Prydain 'Britain' and Greek Πρετανιχή 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. *pṛt- 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 Vijūnas (2006, 98ff). Here it will be sufficient to note that Pokorny's connection of I-Ir. *pṛt- 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 Vijūnas (2006).

followed with a high degree of regularity in multiple Indo-European dialects, and in most instances goes back to prehistoric times.⁷ Therefore, between the zero grade of $p\acute{r}t$ -, $r\acute{t}t$ -, etc. on the one hand and the full grade of $sr\acute{o}t$ -, $r\acute{e}t$ -, and * $v\acute{e}t$ - 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 srót-, $r\acute{e}t$ -, and $v\acute{e}t$ - is to assume that they acquired this full grade once they were employed to build the s-stems $sr\acute{o}tas$ -, $r\acute{e}tas$ -, and $v\acute{e}tas$ -. It is normal for s-stems to have roots in the full grade, cf. Ved. $t\acute{a}pas$ - 'heat' (< * $t\acute{e}p$ -es- \sim Lat. tepor 'warmth'), $v\acute{a}cas$ -'speech, word' (< * $u\acute{e}k^u$ -es- \sim Gk. $ẽ\pi o\varsigma$ '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. $dv\acute{e}s$ -as- 'hatred' (< IE *dueis-), $\acute{o}j$ -as- 'strength' (< * h_2eug -), $p\acute{e}s$ -as- 'ornament' (< *peik-), $s\acute{r}av$ -as- 'fame' (<*eleu-), etc. 8 The development of the nouns $sr\acute{o}tas$ -, $r\acute{e}tas$ -, and * $v\acute{e}tas$ - should therefore probably be reconstructed in the following way (using $sr\acute{o}tas$ - as an example): * $sr\acute{o}u$ -t-/* $sr\acute{e}u$ -t- (t-stem) \rightarrow *sru-t- \rightarrow *sru-t-(root noun) \rightarrow *srau-t-as- (s-stem) > $sr\acute{o}tas$ -.

7. Finally, a few words will be said about the Vedic t-stem $r\acute{t}t$ -. 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 $r\acute{e}tas$ -, too.

The *t*-stem rit- is attested in the fourth stanza of the Rigvedic hymn 6.57 to Indra and Pūsan, cf. yád indro ánayad \underline{rito} mahūr apó vfṣantamaḥ | tátra pūṣábhavat sácā 'when the most vigorous Indra led the [...] great waters, Pūsan came along'. Syntactically, the form rit-as is a plural accusative, and is the direct object of the verb ánayad.

The root of the *t*-stem *rít*- has been identified as *ri*-/*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 <u>strömenden</u> großen Gewässer (in ihre Bahnen) leitete, dar war Pūsan darbei' (Geldner, 2: 159). A similar interpretation of *rít*- can be found in a number of dictionaries, cf. *rí*-*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 EWAia II.437. The word-form *rítas* 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

⁷ The various theories about the origin of the Indo-Iranian *t*-formant in the Indo-Iranian *t*-stems are discussed in more detail in Vijūnas (2006).

⁸ For a more detailed discussion of these forms, see Vijūnas (2006, 98ff).

interpreted the form *ritas* 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 ri-t- becomes semantically similar to two old t-stem nouns attested in Homeric Greek, viz. $\varphi \dot{\omega} \zeta$ 'hero' (stem $\varphi \dot{\omega}$ - τ -< IE * $bhoh_2$ -t-) and $\pi \lambda \dot{\omega} \zeta$ 'swimmer; mullet' ($\pi \lambda \dot{\omega}$ - τ -< * $ploh_3$ -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. ri-t- behaved like $\phi \dot{\omega} \zeta$ and $\pi \lambda \dot{\omega} \zeta$, except that whereas the two Greek nouns eventually became fully nominalized, Ved. ri-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 ri-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 ápo ghṛtám arṣanti síndhavas* 'to him the rivers, the waters stream ghee' (RV 1.125.5c); *ápo arṣanti síndhavaḥ* 'the waters, the rivers stream' (RV 9.2.4b and 9.66.13b), etc.

The interpretation of ri-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 rit- 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 $*h_3r\acute{e}iH$ -

'flow', and the reflexes of a root-final laryngeal can be clearly seen in the following forms: Ved. rināti 'flow' (< * $h_3ri-ne-H-ti$), rīyate 'id.' (< virtual * $h_3riH-ie-$), Gk. ὀρίννω (Lesbian) and ὀρίνω (Attic) 'flow', Gothic rinnan 'run' (< * $h_3ri-n-H-$) etc. (LIV.305). If the Vedic root noun rit- had been built to the zero grade of this root, it should have become rit- (cf. also Ved. ri-ti- 'course' < * $h_3riH-ti-$).

The most simple way to explain the shortness of the root vowel is to reconstruct an original δ/\dot{e} acrostatic paradigm for rit-, in which probably both laryngeals would have been lost due to Saussure's law, cf. **h_3roiH-t-> *roi-t-.\frac{1}{2} The weak stem would have been analogically remade into *rei-t-. As the original δ/\dot{e} ablaut pattern would have been regularly remade into δ/z , the root of the weak stem would have naturally become *ri-t-\frac{1}{2}

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 rit-, since the acrostatic pattern is attested both among root nouns and derivative t-stems. However, since the t of rit- is most probably old, and since rit- itself must have been built before the operation of Saussure's law, the reconstruction of an old derivative t-stem becomes quite attractive.

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Exceptions occur, cf. Ved. us- $\acute{a}s$ - 'dawn' (fem.; \leftarrow IE * h_2eus -os-), $\acute{u}r$ -as- 'breast' (neut.; < * $[h_1]ur$ -es-), $j\acute{u}vas$ - 'quickness' (<* $\acute{g}u[H]$ -es-), etc.

¹¹ The noun ϕ ως 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 π λώς and various related problems, see Vijūnas (2006, 66ff).

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