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Proto-Saamic *ruottē* 'soot': a native word or a borrowing?*

Pralapońskie *ruottē* 'sadza': wyraz rodzimy czy zapożyczenie?

Abstract

The aim of the article is to explain the origins of the Saami words: (northern dialect) *ruohtti* 'thick layer of soot', (Inari dialect) *ryetti* 'soot', derived from the Proto-Saamic *ruottē* 'soot'. It is uncertain whether the Proto-Saamic word is inherited or borrowed from a foreign source. The article takes into account both possibilities. Firstly, PSaa. *ruottē* 'soot' may be derived from the Finno-Ugric *rata* (*rota*) 'hot steam, vapor, fog' attested in Permian and Ugric languages. The juxtaposition is phonologically impeccable and semantically acceptable, as long as we assume the following cycle of semantic changes: 'hot steam' > 'fog, vapor' > 'smoke' > 'smog' > 'incomplete combustion residues' > 'soot'. Secondly, the Proto-Saamic term can be considered to have been borrowed from a Germanic source, cf. OS. *hrot* m. 'soot', MDu. *roet* n. 'grease, soot', Du. *roet* n. 'soot', OHG. *ruoz* m. 'id.', G. *Ruß* m. 'id.' (< WG. *hrōta-* m./n. 'soot'). This etymology is possible for phonological and semantic reasons; however, it is not easy to indicate the ways of adopting the Germanic appellative, attested only in West Germanic languages, into Proto-Saamic. On the other hand, the possibility that WG. *hrōta-* was borrowed in prehistoric times from a Saami source should be strictly excluded.

Keywords: borrowings, Finno-Ugric languages, Germanic-Saamic relations, prehistoric language contacts, Saami languages, Uralic vocabulary

Abstrakt

Celem artykułu jest objaśnienie genezy wyrazów saamskich: (dialekt płn.) *ruohtti* 'gruba warstwa sadzy', (dialekt Inari) *ryetti* 'sadza', wywodzących się z pralapońskiego archetypu **ruottē* 'sadza'. Nie ma pewności, czy pralapoński wyraz został odziedziczony, czy zapożyczony z obcego źródła. W artykule bierze się pod uwagę obie możliwości. Po pierwsze, plap. **ruottē* 'sadza' może wywodzić się z ugrofińskiego prototypu **rata* (**rota*) 'gorąca para, opar, mgła', poświadczonego w językach permskich i ugryjskich. Zestawienie jest doskonałe pod względem fonologicznym i dopuszczalne pod względem semantycznym, o ile założymy następujący cykl przemian znaczeniowych: 'gorąca para' > 'mgła, opar' > 'dym' > 'smog' > 'pozostałości niecałkowitego spalania' > 'sadza'. Po drugie, termin pralapoński może być uznany za zapożyczenie ze źródła germańskiego, por. stsas. *hrot* m. 'sadza', śrhol. *roet* n. 'smar, sadza', hol. *roet* n. 'sadza', stwn. *ruoz* m. 'ts.', niem. *Ruß* m. 'ts.' (< zach.germ. **hrōta-* m./n. 'sadza'). Ten wywód jest prawdopodobny z fonologicznego i semantycznego punktu widzenia, ale niełatwo wskazać drogi przejęcia germańskiego apelatywu, poświadczonego wyłącznie w językach zachodniogermańskich, do języka pralapońskiego. Z drugiej strony, należy stanowczo wykluczyć ewentualność, że termin zachodniogermański **hrōta-* został przejęty w prehistorycznych czasach ze źródła lapońskiego.

Słowa kluczowe: germańsko-saamskie relacje, języki saamskie, języki ugrofińskie, prehistoryczne kontakty językowe, słownictwo uralskie, zapożyczenia

1. Introduction

There are several terms for 'soot' in the Saamic (or Lappic) languages (Witczak, Rychło 2022: 269–287). One of them is only attested in two separate dialects, namely in Northern Saami and Inari Saami, see Saa.N *ruohtti* 'thick layer of soot / großer Ruß', Saa.I *ryetti* 'soot'. Both these words go back regularly to the Proto-Saamic archetype **ruottē* 'soot'.

In our article we would like to discuss the origin of the afore-mentioned Saami words. In Section 2, we intend to review the possibility of a Finno-Ugric derivation, which has not been taken into account in earlier scholarly literature. In Section 3, we review an alternative hypothesis, according to which PSaa. **ruottē* 'soot' is treated as a Proto-Germanic borrowing reflecting PG. **hrōta-* m./n. 'soot'. In Section 4, we want to demonstrate that PG. **hrōta-* m./n. 'soot' cannot be a prehistoric Saami loanword for phonological reasons (the initial phoneme **h-*, absent in the Saami languages, is perfectly acceptable in OS. *hrot* m. 'soot'). Moreover, the West Germanic term **hrōta-* seems to be a purely Germanic innovation derived from PG. **sōta-* n. 'soot' (< PIE. **sōdo-*) by means of the Indo-European prefix **k^{u}u-*. Our conclusions and suggestions will be formulated in Section 5.

2. Proto-Saamic *ruottē 'soot' and Finno-Ugric *rata (*rota) 'hot steam, fog, vapour, mist': Is there any relationship between them?

The Proto-Saamic word *ruottē 'soot', if it represented a Finno-Ugric ingredient in the Saami vocabulary, hypothetically could derive from the alleged Pre-Saami archetype *råtä and further either from FU. *rata, or FU. *rota. It is worth emphasizing that Karoly Rédei in his *Uralisches etymologisches Wörterbuch* reconstructs FU. *ratз (*rotз) 'Dampf, Nebel' on the basis of Udmurt, Zyriene and Khanty lexical data (Rédei 1986–1988: 420). Theoretically, the Saami forms can be related to the Finno-Ugric root in question. Of course, it is necessary to discuss phonological and semantic aspects of the suggested derivation. Let us go on to discuss Finno-Ugric lexical data:

SAAMI: Saa.N *ruohtti* 'thick layer of soot / großer Ruß', Saa.I *ryetti* 'soot' (< PSaa. *ruottē 'soot' < Pre-Saamic *råtä < FU. *rata or *rota);

PERMIC: Udm. *жу* / *ǯu* 'hot burning coals; hot coals, heat / каленые горящие угли; раскаленые угли, жар', *жуаны* / *ǯuanə* 'to burn, ignite / гореть, зажечься' (Wichmann 1954: 53), (Kazan dialect) *žu* 'glowing coal'; Zyr. *ру* / *ru* 'steam, vapour, mist / пар, туман, мгла' (Lytkin, Guljaev 1970: 244; 1996: 174), (Sysola dialect) *ru* 'steam, fog / Dampf, Nebel', Pe. *ru* 'steam, spirit, smell, air / пар, дух, запах, воздух' (Rédei 1968: 77; 1996: 174), Yaz. *ru* 'steam' (< PPe. *ru*, originally perhaps 'hot steam / heißer Dampf');

KHANTY: Kh. *rut* 'steam, vapour, (cold) mist / пар, туман', (Kazym dialect) *rǫt* 'cold mist rising from the brooks / von den Bächen aufsteigenger kalter Nebel', (Tremjugan dialect) *påčəm rut* 'id.' (Karjalainen 1905: 138).

Earlier comparisons in the Uralic literature: Zyr.+Kh. (Toivonen 1927: 189; Collinder 1977: 125); Zyr.+Kh.+?Udm., probably related to Fi. *röka* 'to smoke' (Lytkin 1964: 209); Udm.+Zyr.+Kh., but their relationship to Fi. *röka* 'to smoke' and Vog. *peɣ* 'heat' is doubtful (Lytkin, Guljaev 1970: 244); ?Udm.+Zyr.+Kh. (Rédei 1986–1988: 420; 1996: 174).

It should be stressed that the Udmurt, Zyriene and Khanty terms, as well as the Saami ones, demonstrate the initial consonant *r and a back vowel in the root (probably FU. *a or *o). The medial phoneme *t is preserved in Khanty and Saami, whereas it was completely lost in the Permic languages (Udmurt and Zyriene). Reflexes of the final vowel were regularly eliminated in the Permic and Ugric languages, but the possible Saami equivalent suggests the original vowel *a (hence Pre-Saamic *ä and Proto-Saamic *ē), see Tables 1 and 2.

Table 1. Comparison of the regular reflexes of some selected Uralic phonemes

Finno-Ugric	*r	*a	*o	*t	*-a
Proto-Saamic	*r	*uo	*uo	*tt	*-ē
Proto-Permic	*r	*u	*u	Ø	-Ø
Proto-Khanty	*r	*ā	*ā	*t	-Ø

Source: our own work.

On the other hand, Fi. *röka* 'to smoke' and Vog. *peʕ* 'heat' show the front vowel (FU. *ä) and the different consonant *k in the intervocalic position. Karoly Rédei reconstructs two Uralic prototypes *reŋkз* 'warm, hot / warm, heiß' (Rédei 1986–1988: 422–423) and *reŋз* (or *rekз*) 'warm; warmth, heat / warm; Wärme, Hitze' (Rédei 1986–1988: 423, 883) on the basis of the Permic, Ugric and Samoyed terms. He rejects the connection of the Uralic root in question with Fi. *räkki* 'heat / Hitze' and Hu. *reked-* 'to get stuck / stecken bleiben', as well as its relationship with the Permic forms (Udm. *ʒu* 'glühende Kohle', Zyr. *ru* 'Dampf'), which evidently demonstrate a back vocalism.

The descent of the Saami term for 'soot' and FU. *rata* or *rota* 'hot steam, fog, mist', also 'glowing coal', is perfectly possible from the phonological point of view, as demonstrated in Table 2.

Semantic aspects of the suggested comparison of the Saamic terms for 'soot' with the Finno-Ugric root *rata* (or *rota*) 'smoke, fog / Dampf, Nebel' may be easily explained on the basis of the Udmurt terms denoting 'hot burning coals' or 'glowing coal'. The soot represents a "black powder that is produced when wood, coal, etc. is burnt" (Hornby, Wehmeier 2010: 1459). If the soot is usually created by burning coals, then the suggested Saami-Udmurt relationship seems to be well established from the semantic point of view. The Zyriene and Komi-Permiac equivalents of the Udmurt noun denote 'steam / Dampf', secondarily also 'fog, mist' (i.e. 'туман, мгла' in Russian). Etymologists commonly suggest that the sense of the Proto-Permic archetype *ru* should be reconstructed as 'hot steam / heißer Dampf', cf. e.g. Rédei's words summarized earlier opinions: "Die Bedeutung 'glühende Kohle' im Wotj[akischen] entwickelte sich möglicherweise aus einer früheren Bedeutung 'heißer Dampf'" (Rédei 1986–1988: 420). The Khanty (Ostyak) terms do not express 'a hot steam', i.e. a gas or a vapour into which boiling water changes, but rather 'a cold mist rising from brooks'. In fact, the semantic change 'hot steam' > 'steam' > 'fog, mist' > 'cold mist' can be easily explainable in the North Siberian environments of the Ostyak tribes.

Table 2. Three Finno-Ugric roots in comparison

Languages	FU. **ćata** 'hundred' (a loanword from Indo-Iranian *ćatám n. '100')	FU. **rata** or **rota** 'hot steam, fog, mist', secondarily 'glowing coal, soot'	FU. **kota** 'tent, hut, house'
Saami	Saa.N čoatte 'hundred', also čuođi (analogically generalized weak grade), Saa.I čyeti 'id.' etc. (< PSaa. *ćuottē 'hundred')	Saa.N ruohtti 'thick layer of soot / großer Ruß', Saa.I ryetti 'soot' (< PSaa. *ruottē 'soot')	Saa.N goatte 'tent; Lapp hut', Saa.L kǎhtē 'id.' etc. (< PSaa. *kuottē 'tent, hut')
Finnic	Fi. sata 'hundred', Est. sada 'hundred' (< BFi. *sata)	?	Fi. kota 'tent, Lappic hut; summer kitchen', Est. koda 'house, building, porch, summer kitchen of the peasants' (< BFi. *kota)
Mordvin	Mrd.E śado 'hundred', Mrd.M śada 'hundred' (< PMrd. *śadå)	?	Mrd.E kudo 'house, living room', Mrd.M kud 'id.'
Cheremis (Mari)	EMa. šüδö 'hundred', HMa. šüδə 'hundred' (< PCher. *šüδə)	?	EMa. kuδo 'Mari summer hut', HMa. kuδə̂ 'id.'
Permic	Udm. śu 'hundred', (Kazan) śů 'hundred'; Zyr. (Sysola) śo, dial. śo̭, śu 'hundred' (< PPe. *śu 'hundred')	Udm. ʒu 'hot burning coals, heat', (Kazan) žu 'glowing coal'; Zyr. ru 'steam, vapour, mist', Pe. ru 'air, steam, smell', Yaz. ru 'steam' (< PPe. *ru 'hot steam, glowing coal')	Udm. kor-ka 'house, room', (Sarapul) kar-ka 'house', vu-ko 'mill'; Zyr. (Sysola) ker-ka, vić-ko 'church', Pe. ker-ku, vić-ku 'id.', (< PPe. *ku 'house')
Khanty (Ostyak)	Kh. (Vach) sat, (Upper Demjanka) sot, (Obdorsk) sat 'hundred' (< PKh. *sāt 'hundred')	Kh. (Tremjugan) rut 'steam, vapour, cold mist', (Kazym) rǫt 'cold mist rising from the brooks' (< PKh. *rāt 'mist')	Kh. (Vach) kat 'house', (Upper Demjanka) χot, (Obdorsk) χat 'id.' (< PKh. *kāt 'house')
Mansi (Vogul)	Vog. (Tavda) šē̮t 'hundred', (Lower Konda) šāt, (Pelymka) šē̮t, (Sosva) sāt 'id.'	?	?
Hungarian	Hu. száz 'hundred'	?	OHu. ház 'room', Hu. ház 'house; family'

Source: our own work.

If we accept the tentative hypothesis that the Saami term for 'soot' (reconstructed as PSaa. *ruottē) represents a straightforward reflex of FU. *rata (*rota), then the original semantics of the Finno-Ugric prototype should be verified or discussed afresh. The reflexes of the Finno-Ugric nominal root demonstrate four slightly different meanings: 'soot' (in Saami), 'glowing coal' (in Udmurt), 'steam, fog, mist' (in Zyriene) and 'cold mist rising from the brooks' (in Khanty). Theoretically, FU. *rata (or *rota) could denote 'hot steam, fog, mist', but also 'smog', i.e. 'a mixture of fog and smoke'. Of course, it is also plausible that the semantics, preserved in Udmurt ('glowing coal'), were primitive or relatively not far from the original meaning. Many cognates display considerable differences in meaning, e.g. Polish *wabić* 'to decoy, allure, lure' vs. English *weep* (Rychło 2016: 103–124). In such cases, it is important to explain the mechanisms of semantic change. A feasible development from 'glowing coal' through 'hot steam' to 'soot' can be conceptually justified with the help of metonymic extension. A similar change occurred in the English word *brass*. The basic sense 'a yellow alloy of copper and zinc' became extended metonymically to denote: 'a decorative object made of brass', e.g. *shining brasses stood on the mantelpiece*. Additionally, the word *brass* may refer to 'brass wind instruments (including trumpet, horn, and trombone) forming a band or a section of an orchestra', e.g. *the brass were consistently too loud*. Likewise, within the concept 'soot', we may discern earlier phases of its obtaining, such as: 'glowing coal' or 'steam'.

3. Proto-Saamic *ruottē* 'soot' and West Germanic *hrōta-* 'soot'

As far as we know, Jorma Koivulehto (2003: 298) was the first scholar who explained the Northern Saami *ruohtti* '(thick layer of) soot / großer Ruß' as a possible West Germanic borrowing ("aus dem Germanischen"), cf. G. *Ruß* m. 'soot' (< West Germanic *hrōta-* 'id.'). The excellent Uralicist Ante Aikio (known also under his Saami name Luobbal Sámmol Sámmol Ánte) takes a slightly different position suggesting that Saa.N *ruohtti* was borrowed from an unattested Nordic noun *hrōta-* (Aikio 2020: 9). In fact, the actual distribution of *hrōta-* is limited to the West Germanic vocabulary:

3.1. OS. *hrot* m. 'soot'; OHG. *ruoz* m. 'soot', G. *Ruß* m. 'id.' < WG. *hrōtaz* m. (*a*-stem) 'soot'; MDu. *roet* n. 'grease, soot', Du. *roet* n. 'soot' < WG. *hrōtan* n. (*a*-stem) 'soot' (Kroonen 2013: 249).

We can agree with Aikio that this word could not have been borrowed directly into the Saami dialects either from G. *Ruß* m. 'soot', or from OHG.

ruoz m. 'id.'. Such a likelihood seems hardly possible for phonological reasons, as well as on account of chronology and geographical distance. Theoretically, other attested West Germanic forms, like OS. *hrot* m. 'soot', MDu. *roet* n. 'grease, soot', Du. *roet* n. 'soot', may be treated as a likely source. All of them retain the phoneme *t*, which is regularly rendered as -*tt*- in Saami. Phonologically, it is also conceivable that the word has a Low German source, though what remains without explanation is the circumstances in which the speakers of Old Saxon or (Old) Dutch established language contact with the prehistoric Saami people. This is why we should also take into consideration Aikio's conjecture that the Saa.N *ruohtti* 'thick layer of soot' might be a borrowing from an unattested Nordic source. Aikio adds valuable comments to his suggestion:

> The origin of the Germanic word remains unknown [...], but the Saami form shows that it must have once occurred in Norse, too. The distribution of the word is limited to North and Inari Saami, but despite this the borrowing is probably quite old, considering that no trace of the word survives in Norse. The loan etymology is both phonologically and semantically completely transparent, and as such requires no further comment (Aikio 2020: 9).

Aikio (2020: 9) strongly suggests that an unattested Nordic term *hrót* (< NG. *hrōtan* n. 'soot') can be reflected as a loanword in two Saami dialects. Of course, the direction of borrowing in the northern (Scandinavian) area cannot be established with certainty. However, the influence of the Saami language on Proto-Germanic seems hardly acceptable for phonological reasons. Note that the initial phoneme *h*-, which is absent in the Saami languages, appears in OS. *hrot* m. 'soot'. Thus, the Old Saxon lexeme begins with the consonant cluster *hr*-, which is inadmissible in the Uralic languages. This is why the West Germanic noun *hrōta*- 'soot' cannot be treated as a foreign loanword taken from a Saami source.

4. West Germanic *hrōta*- 'soot' from the etymological point of view

Most modern linguists claim that the etymology of WG. *hrōta*- m./n. 'soot' cannot be established with certainty. The following remarks in modern etymological dictionaries: "Herkunft unklar" (Kluge, Seebold 1999: 697); "No certain etymology" (Kroonen 2013: 249). Guus Kroonen postulates a possible comparison with OE. *hrūm* m. 'soot' (< PG. dial. *hrūmaz* m.), whose "suffixation remains unclear" (Kroonen 2013: 249). We wish to argue that WG. *hrōta*- can be treated as an inherited compound which

includes the basic noun (PG.) *$sōta$- n. 'soot', attested in the Northern and Western Germanic areas.

4.1. ON. *sót* n. 'soot', OE. *sōt* 'id.', MLG. *sōt* 'id.' < PG. *$sōta$- n. 'soot' < IE. dial. (Northern) *$sōdo$- n. 'soot' ← PIE. *sed- 'to sit' (Orel 2003: 360; Witczak, Rychło 2022: 273).

Apart from this root, the compound also contained the morpheme *$k^u u$- (with the sense 'bad'), which in the course of time became a prefix of the augmentative or pejorative function WG. *h- (earlier CG. *hw- < PG. *hwu-)[1]. The intervocalic phoneme *-s- is always retained in Proto-Germanic after the original (Indo-European) stress and changed to PG. *-z- and later to *-r- if the original stress did not immediately precede. In other words, the phonological development of West Germanic *$hrōta$- 'soot' can be reconstructed as follows:

4.2. IE. dial. (Northern) *$k^u u$-$sōdo$- n. (secondarily m.) 'bad soot; thick layer of soot' > Early PG. *$hwusōta$- > PG. *$hwuzōta$- > Late PG. *$hwurōta$- > Early CG. *$hwrōta$- > WG. *$hrōta$- m./n. 'soot' (Witczak, Rychło 2022: 277).

The Proto-Germanic noun *$hwīlō$ f. 'while' can also be analyzed as a compound containing the Indo-European prefix *$k^u u$- and the basic noun (PIE.) *$u̯éi̯leh_2$ f. 'period, time'. The lexical data taken from some Indo-European subgroups, including Indo-Aryan, Germanic and Slavic, is presented in Table 3.

Table 3. Two Proto-Indo-European terms for 'period, time' in a diachronic perspective

Proto-Indo-European	PIE. *$u̯éi̯leh_2$ f. 'period; time'	PIE. *$k^u u$-$u̯éi̯leh_2$ f. 'bad period; bad time'
Late Indo-European	IE, dial. (Eastern) *$u̯éi̯lā$ f. 'period, time'	IE. (Eastern) *$k^u u u̯éi̯lā$ f. 'bad period, bad time' and (Northern) *$k^u éi̯lā$ f. 'while'
Indo-Aryan	Ved. *vélā* f. 'limit, boundary, end; distance; coast, shore; limit of time, period, season, time of day, hour', Pa. *velā*- f. 'shore, time', Pj. *velā*, *belā* m. 'time', La. *velā* m. 'time', Hi. *ber* f. 'limit, season, time' etc. (Turner 1966: 702; Mayrhofer 1970: 261)	Pj. *kuvel* f. 'lateness' < IAr. *ku-vēlā* f. 'bad time'; Pj. *kuveḷā* adj. 'late'; La. *koel* adj. 'unsuitable, untimely' < IAr. *ku-vēlya*- adj. 'late, untimely' (Turner 1966: 173)

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[1] According to Ringe (2006: 92), "labiovelars were delabialized next to *u. This probably reflects the persistence of the PIE rule, operating as a surface filter. All the certain new examples involve *u that developed from syllabic sonorants [...] and some also involve labiovelars that arose by the merger discussed in the preceding paragraph". What Ringe is referring to is the process by which "labiovelars and sequences of velar plus *w merged (Ringe 2006: 90), see e.g. ON. *kursi*, *kussi* m. 'bull calf' < NG. *kursan*- m. 'bull calf' (Kroonen 2013: 312) < PG. *kwuwursan*- < Northern IE. *$g^u u$-$u̯r̥son$- m. 'bull' < IE. *$g^u u$-$u̯r̥son$- m. 'cow-bull', cf. Ved. *go-vr̥ṣán*- m. 'bull', Toch. A *kayurṣ*, Toch. B *kaurṣe* 'bull' (< IE. *$g^u ou̯$-$u̯r̥son$- m. 'bull').

cont. Table 3

Nuristani	Ash. *wēl*, Waig. *wēl*, Kt. *wēl* 'time, season, year' < PNur. *wailā* f. 'id.' (Turner 1966: 702)	Not attested
Dardic	Kashm. *vil* f. 'short space of time', *vēla*, *vēra* m. 'time, hour', *vēri* f. 'time, occasion', Sh. *bĕl*, *bil* 'at the time of' < PD. *vailā-* f. / *vaila-* m. 'time' (Turner 1966: 702)	Kashm. *kŏvizi*, *kŏzi* adv. 'at a bad or inauspicious time' < PD. *ku-vērya-* adj. 'being at a bad time'
Iranian	Bal. *vēlā* 'a mealtime, time', Wan. *vel* f. 'dinner, a mealtime; food' (Morgenstierne 2003: 87) < Iranian *váilā* f. 'period, time'	Not attested
Germanic	Not attested	Go. *ƕeila* f. 'period, while', ON. *hvíla* f. 'bed' (originally 'period of resting'), Far. *hvíla* f. 'rest. repose; bed', Elfd. *waila* f. 'while'; OE. *hwīl* f. 'while', E. *while*; OFri. *hwīl(e)* f. 'while'; OS. *hwīla* f. 'while'; MDu. *wile* f. 'while'; OHG. *wīla*, *hwīla* 'while', G. *Weile* 'while' (Lehmann 1986: 199–200; Kroonen 2013: 266–267).
Slavic	Not attested	OCz. *čila* f. 'while', adv. *včile* 'now, at once, immediately' < PSl. *čila* f. 'while, period' (Sławski 1976: 198).

Source: our own work.

　　　The examples listed in Table 3 lead to the conclusion that the original Proto-Indo-European cluster *$k^u u\u$-, clearly attested in some Indo-Aryan languages, was simplified to *k^u- in some northern dialects of Late Indo-European, including Proto-Germanic and Proto-Slavic. The Indo-Aryan languages preserved not only the productivity of the pejorative suffix *ku-*, but also the primitive status of the compound.

　　　The simplification of the cluster *$k^u u\u$- must have appeared as early as in the Late Indo-European times, as documented by two similar words for 'worm': IE. *$\u rmis$ and IE. *$k^u \r mis$. According to most etymologists (Porzig 1954: 208, 215; Pokorny 1959: 649, 1152), both these terms can be reconstructed for Proto-Indo-European. Moreover, they are frequently treated as "zwei Reimwörter" (Porzig 1954: 208). The distribution of the related forms in the Indo-European languages is presented in Table 4.

Table 4. Two related terms for 'worm' in the Indo-European languages

Proto-Indo-European	PIE. *$u̯ŕ̥mis$ m. 'worm'	PIE. *$ku̯u-u̯ŕ̥mis$ m. 'a kind of worm; a bad worm'
Late Indo-European	IE. *$u̯ŕ̥mis$ m. 'worm', also IE. dial. *$u̯ŕ̥mos$, *$u̯ormós$ m. 'worm' and (Eastern) 'ant'	IE. *$ku̯ŕ̥mis$ m. 'a kind of worm'
Indo-Aryan	? Ved. *vamráḥ* m. 'ant' (if it derives from *$u̯ormós$ by an irregular metathesis of the cluster *-rm-* > *-mr-*).	Ved. *kŕ̥miḥ* m. (*i*-stem) 'worm, insect', Skt. *krimiḥ* 'a silk-worm; a shield-louse; an ant' (lex.); Pa. *kimi-* m. 'worm, insect'; Pk. *kimi-* m. 'id.' itd.
Nuristani & Iranian	Ash. *b́ŕamī*, *blamī́* 'ant', Kt. *wŕamik*, *ŕamik* 'id,', Pr. *wómī*, *wōmigyī́* 'ant' < PNur. *$vramī-$ f. 'ant' (Turner 1966: 659)	MPers. *kirm* 'worm, dragon, snake', NPers. *kirm* 'id.', Sogd. *kyrm-* 'snake' < PIr. *$kŕ̥mis$
Tocharian	Toch. B *warme* m. 'ant' < IE. *$u̯ŕ̥mos$ (Adams 2013: 630)	Not attested
Palaeo-Balkan (Greek & Albanian)	Gk. dial. ῥόμος m. 'woodworm, tree-boring beetle' (Beekes 2010: 1291). It seems to be an Aeolic or Achaean word, which goes back to IE. *$u̯ŕ̥mos$ m.	Alb. (Tosk) *kri*, (Gheg) *krî* f. 'woodworm, moth' (< PAlb. *$krimi-$); (Tosk) *krimb*, (Gheg) *krym* m. 'worm, maggot, catterpillar' (< PAlb. *$krimu-$)
Italo-Celtic	Lat. *vermis* m. (*i*-stem) 'worm, maggot' < PIt. *$wormis$ (< IE. *$u̯ŕ̥mis$) (de Vaan 2008: 665)	OIr. *cruim* f. (*i*-stem) 'worm, maggot'; OW. *prem*, MW. *pryf* m. 'worm'; OCo. *prif* gl. 'vermis', MCo. *pref* 'worm'; MBret. *preff*, Bret. *preñv* m. 'worm' < PC. *$ku̯rimis$ m. / f. (Matasović 2009: 181–182).
Germanic	Go. *waúrms* m. (*o*-stem or *i*-stem) 'snake'; ON. *ormr* m. 'snake', Icel. *ormur*, Far. *ormur*, Elfd. *uorm* 'snake', Norw. *orm*, Sw. *orm* 'snake', Dan. *orm* 'worm' (< NG. *$wurmaz$); OE. *wyrm* m. 'snake, dragon, worm', OFri. *wirm* m. 'worm', OS. *wurm*, *worm*, Du. *worm*, *wurm* c. 'id.', OHG. *wurm* m. 'worm, snake', G. *Wurm* 'worm', also 'cochineal, roundworm', poet. 'viper, reptile, dragon' (< WG. *$wurmiz$ m. 'worm') (Zalizniak 1965: 191; Kroonen 2013: 600);	Not attested
Baltic	Lith. (Žem.) *vařmas*, dial. *vármas* m. (*o*-stem) 'mosquito', dial. 'horsefly; any stinging insect; flying ant' < IE. *$u̯ormós$ (Smoczyński 2018: 1609)	Lith. *kirmìs* f. (*i*-stem), *kiřmis* m. (*jo*-stem) 'grub, worm; tapeworm; viper', coll. 'eggs or larvae of bees'; Latv. *cirmis* 'grub, worm'; OPr. *girmis* 'grub' (Smoczyński 2018: 549)

cont. Table 4

Slavic	OCS. *vьrmьje* n. coll. 'insects', ORu. *вѐрмие* n. coll. '(swarm of) locust; insects' (< PSl. *vьrmьje* n. coll.)	Sla. dial. *črm* 'big wasp', dimin. *črmak* m. 'id.'; OPol. *czyrzmień* f. 'grub' (< PSl. *čr̥mъ* m. 'worm, Polish cochineal / robak, czerw' (Sławski 1976: 224, 225)

Source: our own work.

According to Michiel de Vaan, the observed distribution "might be the result of a development of *k^wrmi- > *wrmi-* in Latin and Germanic" (de Vaan 2008: 665). This seems to be an *ad hoc* surmise. It is more probable that two Indo-European etyma: IE. *u̯ŕmis* m. 'worm' and IE. *k^uŕmis* m. 'a kind of worm', are related to one another. We postulate that IE. *u̯ŕmis* appears to be a primary formation[2], whereas IE. *k^uŕmis* (< PIE. *k^uu-u̯ŕmis*) can be interpreted as a secondary formation, i.e. a derivative containing the augmentative or pejorative suffix *k^uu-* ('bad').

All the examples, quoted in Table 3 and 4, clearly demonstrate that the Indo-European prefix *k^uu-* (with the augmentative or pejorative sense) was used not only in Indo-Iranian, but also in the Celtic, Germanic, Albanian, Baltic and Slavic languages. The same particle *k^uu-* seems to appear as *h-* in the West Germanic noun *hrōta-* m./n. 'soot'. The remaining part of the last word can be related to PG. *sōtan* n. 'soot' from North IE. *sōdom* n. 'id.'. By Grimm's Law, the sounds *k^u* and *d* regularly developed into *h^u* and *t*, respectively (Rychło 2014), and the sound *s* underwent Verner's Law (*s > *z*) and rhotacism (*z > *r*). Consequently, WG. *hrōta-* m./n. 'soot' can be derived from IE. dial. (Northern) *k^uu-sōdo-* n. (secondarily m.) with the structural meaning: 'bad soot; thick layer of soot'.

5. Conclusions

Two Saami terms for 'soot' (Saa.N *ruohtti* 'thick layer of soot', Saa.I *ryetti* 'soot' < PSaa. *ruottē* 'soot') may be explained in two ways. One possibility is that they represent the Finno-Ugric heritage and derive from FU. *rata* (or *rota*) 'hot steam, fog, mist'. Alternatively, they can be early borrowings from the Proto-Germanic noun *hrōta-* m./n. 'soot', attested in some West

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[2] It is worth emphasizing that the Proto-Slavic collective noun *vьrmьje* n. 'insects' is evidently related to ON. *yrmi* n. coll. 'vermin / Gewürm' and G. *Gewürm* n. coll. 'vermin, (swarm of) amphibians' (< PG. *wurmijan*, also *ga-wurmijan* n. coll.) (Rychło, Witczak 2022). There are also a number of Slavic and North Germanic arboreal collectives in *-i̯om* (Habrajska, Rychło, Witczak 2020: 261–283; Witczak, Habrajska, Rychło 2022: 162–167).

Germanic languages, including Old Saxon, Middle Dutch, Old High German, Dutch and German.

After accepting the first (i.e. purely Finno-Ugric) etymology, the Saami and Proto-Germanic words denoting 'soot' should be treated as two independent formations. In this situation their phonological and semantic similarity (PSaa. *ruottē* vs. WG. *hrōta-*) would be completely accidental (see e.g. Rychło 2019: 139–142 for accidental convergences). The Proto-Germanic term for 'soot' cannot be explained as a borrowing from a Saami source for phonological reasons (the initial cluster *hr-* in West Germanic precludes such a possibility). On the other hand, WG. *hrōta-* 'soot' seems to be a purely Germanic (or North Indo-European) lexical innovation, related to PG. *sōta-* 'soot', as suggested in Section 4.

Finally, we might consider the term for 'soot' in the context of the change of lifestyle from hunting and gathering to agricultural. There are more borrowings which confirm language contact in such circumstances: for example, the Northern Proto-Germanic tribes borrowed the term for 'Saami hut, dugout' directly from the Saami people (cf. Kowalski, Rychło, Witczak 2020). They also knew the elements of solid structures and constructions, as evidenced by words for 'a beam', 'a pole' or 'a granary on stilts' (Häkkinen 2007: 182). It should come as no surprise that the Uralic tribes perceived and conceptualized soot as part of their existence.

Language abbreviations

Alb. – Albanian; Ash. – Ashkun; Bal. – Balochi; BFi. – Balto-Finnic; Bret. – Breton; CG. – Common Germanic; Dan. – Danish; Du. – Dutch; E. – English; Elfd. – Elfdalian (Övdalian); EMa. – Eastern Mari; Est. – Estonian; Far. – Faroese; Fi. – Finnish; FU. – Finno-Ugric; G. – German; Gk. – Greek; Go. – Gothic; Hi. – Hindi; HMa. – Hill Mari; Hu. – Hungarian; IAr. – Indo-Aryan; Icel. – Icelandic; IE. – Indo-European; Kashm. – Kashmiri; Kh. – Khanty (Ostyak); Kt. – Kati; La. – Lahnda; Lat. – Latin; Latv. – Latvian; Lith. – Lithuanian; MBret. – Middle Breton; MCo. – Middle Cornish; MDu. – Middle Dutch; MLG. – Middle Low German; Mrd.E – Erzya Mordvin; Mrd.M – Moksha Mordvin; MPers. – Middle Persian; MW. – Middle Welsh; NG. – North Germanic; Norw. – Norwegian; NPers. – New Persian; OCS. – Old Church Slavic; OCo. – Old Cornish; OCz. – Old Czech; OE. – Old English; OFri. – Old Frisian; OHG. – Old High German; OHu. – Old Hungarian; OIr. – Old Irish; ON. – Old Norse; OPol. – Old Polish; OPr. – Old Prussian; ORu. – Old Russian; OS. – Old Saxon; OW. – Old Welsh; Pa. – Pali; PC. – Proto-Celtic; PD. – Proto-Dardic; Pe. – Permyak; PG. – Proto-Germanic; PGk. – Proto-Greek; PIE. – Proto-Indo-European; PIr. – Proto-Iranian; PIt. – Proto-Italic; Pj. – Panjabi (Punjabi); Pk. – Prakrit; PKh. – Proto-Khanty; PMrd. – Proto-Mordvin; PNur. – Proto-Nuristani; PPe. – Proto-Permic; Pr. – Prasun; PSaa. – Proto-Saamic; PSl. – Proto-Slavic; Saa.I – Inari Saami; Saa.L – Lule Saami; Saa.N – Northern Saami; Sh. – Shina; Skt. – Sanskrit; Sla. – Slovak; Sogd. – Sogdian; Sw. – Swedish; Toch. A – Tocharian A (East Tocharian); Toch. B – Tocharian B (West Tocharian); Udm. – Udmurt;

Ved. – Vedic; Vog. – Vogul (Mansi); Waig. – Waigali; Wan. – Wanetsi (a dialect of Pashto); WG. – West Germanic; Yaz. – Yazvian (Eastern Permic dialect); Žem. – Žemaitian (Samogitian); Zyr. – Zyriene (Komi).

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