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FINNIC NUMERALS FOR '8' AND '9' AND A POSSIBLE PARALLEL FROM SAMOYED*

Abstract. The paper deals with a suffix contained in the Finnic numerals for 'eight' and 'nine', such as the Estonian <code>kahe-ksa</code> and <code>ühe-ksa</code>. Taking into consideration the forms of some southern varieties of Finnic, such as Votic and Livonian, it is proposed to reconstruct the Proto-Finnic suffix *-ksama/*-ksämä and compare it with the segment -saa in Tundra Enets <code>eesaa</code>, Forest Enets <code>neesaa</code> 'nine', tracing them back to Proto-Uralic *-kśama.

Keywords: Finnic languages, Samoyed languages, numerals, Uralic etymology.

The Uralic numerals for 'eight' and 'nine' have always been a puzzle for etymologists. While in most Uralic languages they are obviously related to the roots 'one', 'two' or 'ten', thus meaning, presumably, 'two to ten' and 'one to ten', the exact nature of this relation is unclear. The aim of this paper is to propose just a step towards the final solution by establishing a link between the Finnic and some Samoyed data.

Finnic languages are not an exception to this puzzle. Numerals like Est. *kaheksa*, *üheksa*, Fin. *kahdeksan*, *yhdeksän* etc. are, beyond any doubt, derived from **kakte* '2' and **ükte* '1', but their last segment remains unexplained. At present, there are two competing explanations.

E. Itkonen (1973) suggested that $eks\ddot{a}(n)$ may have been originally a stem of the negative verb e-, followed by the reflexive suffix -k-, the 3sG marker $-s\ddot{a}$ and, in the case of kahdeksan, the dual marker -n, and the whole would have once meant 'one/two do not exist, are absent [from ten]'. Another view is that the second part of these numerals goes back to the Indo-European borrowing * $teks\ddot{a}$ 'ten' (Parpola 1999). The former view is supported, i.a, in Honti 1993: 110; UEW 807 and in SSA (1:271; 3:488), and EES (s.v.) takes both hypotheses for possible.

However, in the most recent collection of Uralic etymologies, Luobbal Sámmol Sámmol Ánte (Aikio) rejects both of them, rightly noting that neither $*eks\ddot{a}(n)$ nor $*teks\ddot{a}$ are really attested in any Uralic language, and, moreover,

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that a compound like "two-ten" would rather mean 'two tens = 20' and not 'ten minus two' (Luobbal Sámmol Sámmol Ánte (Aikio) s.v. $\ddot{u}ktiks\ddot{a}(n)$). Aikio subsumes under the Proto-Uralic $\ddot{u}ktiks\ddot{a}(n)$ 'nine' only the Proto-Finnic $\ddot{u}kteks\ddot{a}n$: $\ddot{u}kteks\ddot{a}n$, Proto-Mordvin $\ddot{v}vejks\eth$ and Proto-Saamic $\ddot{u}kc\bar{e}\sim \ddot{v}okc\bar{e}(n)\sim \ddot{v}ekc\bar{e},^1$ the latter most probably being an early borrowing from Proto-Finnic. At the same time he rejects the Permic and Mari forms with the same meaning, which were considered as cognates earlier. The same is said to be true for the Proto-Uralic $\ddot{v}kahteksan$ 'eight'. As concerns the second part of these forms $\ddot{v}(i)ksa(n)/\ddot{v}(i)ks\ddot{a}n$, its origin remains unknown.

Recently, Vladimir Napol'skich (Напольских 2012 : 208—209) has suggested another etymology for the Saamic-Finnic-Mordvin *kahteksa(n)/*üktiksä(n) and Permic *kijkjam3s/*ökm3s: *kekta-kta-k-3s(-3n), *ükte-ktä-k-3s in the former case and kekta-kta-m-3s, *ükte-ktä-m-3s in the latter, where *-ktA-k is the nominal abessive (= abessive case) marker, *-ktA-m is the adjectival abessive and -3s the nominalisation affix. However, the last part of the Finnic forms -an (-am in oblique case forms) remains obscure; Napol'skich adds it in brackets without any explanation. Besides, attaching a nominaliser to an already nominal form (and, moreover, a case form) also seems somewhat strange.

So, the fragment *-(i)ksa(n)/*-(i)ksan is still not fully explained. As I will try to show in this paper, it may have a cognate in Samoyed.

In what follows, Section 1 will give a short overview of the numerals for '8' and '9' and the peculiarities of their declension compared with their "neighbours" '7' and '10' in different Finnic languages. Then an alternative (in fact, existing but forgotten) reconstruction for Proto-Finnic will be proposed. Section 2 will present the Samoyed data and point to a possible parallel, and in Section 3, the resulting etymology will be briefly discussed.

1. Stems of numerals for 'eight' and 'nine' in Finnic

Inflection of nominals (as well as of verbs) in Finnic languages involves an intricate system of stem alternations, which cannot always be predicted by rules. This is also true for the numerals 'eight' and 'nine', as well as for 'seven' and 'ten' — "omituiset *n*-loppuiset lukusanamuodot" ('strange forms of numerals ending by *n*') in Setälä's (1899 : 400) terms.

In tables below, the stem alternations of these numerals are illustrated with the forms of NOM.SG, GEN.SG, PART.SG or PART.PL and also with the corresponding ordinal numeral.

In the nothernmost varieties of Finnic, such as standard Finnish and Karelian, the words for '8' and '9', as well as for '7' and '10', form a separate inflectional class with a final -n in NOM.SG, but without it in other forms (illustrated here with GEN.SG and PART.SG forms); the latter stem is also used to form ordinal numerals:

Finnis	s h			
NOM.SG	seitsemä-n	kahdeksa-n	yhdeksä-n	kymmen-en
GEN.SG	seitsemä-n	kahdeksa-n	yhdeksä-n	kymmen-en
PART.SG	seitsemä-ä	kahdeksa-a	yhdeksä-ä	kymmen-tä
ORD	seitsemä-s	kahdeksa-s	yhdeksä-s	kymmen-es

¹ All the etymologies cited in this paragraph are Aikio's (Luobbal Sámmol Sámmol Ánte (Aikio)).

Karelian

NOM.SG	seiččeme-n	kaheksa-n	yheksä-n	kymmen-en
GEN.SG	seiččeme-n	kaheksa-n	yheksä-n	kymmen-en
PART.SG	seiččemy-ä	kaheksu-a	yheksy-ä	kymmen-tä
ORD	seiččeme-s	kaheksa-s	yheksä-s	kymmen-es

In other languages, such as Estonian and Veps, *kaheksa* and *üheksa* have no -*n* in the nominative and they behave as plain vowel stems, displaying no trace of any nasal. In Veps, the same is true for *seičeme* '7' and *kümne* '10'. In Estonian, *kümme* '10' also has no final -*n* in the nominative, but has preserved it in the oblique stem; *seitse* '7' has no -*n* at all, and the penultimate -*m* appears in oblique stems only.

Estonian

NOM.SG GEN.SG PART.PL ORD	seitse seitsme seitsmeid seitsmes	kaheksa kaheksa kaheksaid kaheksas	üheksa üheksa üheksaid üheksas	kümme kümne kümneid kümnes
Veps	(Зайцева, Мул	плонен 2007 : 74	, 115, 119, 412)	
NOM.SG	seičeme	kahesa	ühesa	kümne
GEN.SG	seičemen	kahesan	ühesan	kümnen
PART.PL	seičemid	kahesid	(no form given)	(no form given)
ORD	seičemenź	kahesannź	ühesannź	kümnennź

The third pattern is typical for some southern idioms such as the Votic and Livonian languages and the Mulgi and Hiiu dialects of Estonian, where the numerals for 'eight' and 'nine' have -m(V) added in their oblique stems. See the following V o t i c forms (Маркус, Рожанский 2017 : 466—468, 470—471):

NOM.SG	sejtse	kahęsa	ühesä	<i>tšümme</i>
GEN.SG	sejttseme	kahesseme	ühesseme	tšümmene
PART.SG	sejttsemä	kahęssęma	ühessemä	tšümmenä
ORD	sejtsemäjź	kahęssęmajź	ühessemäjź	tšümmenäjź

In L i v o n i a n, m is absent from the case forms, but appears in ordinal numerals for '7', '8' and '9' (see Kettunen 1938 s.v.):²

NOM.SG	sejš	kō̞'d∂ks	ī'd∂ks	$ki\overline{m}$
ORD	seisməz	$k\bar{o}'d\hat{\sigma}ksm\hat{\sigma}z^3$	$\bar{\imath}'d\hat{\imath}ksm\hat{\imath}z$	$ki\overline{m}d\hat{\sigma}z$

In Hiiu and Mulgi dialects, variative forms with and without m are attested:

Hiiu Estonian (Kokla 2015 s.v.)

NOM.SG	seitse	kaheksa, kahesa	üheksa, ühisa	kümme
GEN.SG	`seitsme	kaheksme, kahesa	üheksme, ühisme	`kümne
PART.SG	seitsend	kaheksmed, kahesad	üheksend, üheksmed, ühismed	kümmend
ORD	`seitsmes	(no form given)	üheksmes	kümnes

 $[\]overline{^2}$ In the Salaca dialect of Livonian, however, 'eighth' and 'ninth' had n instead of m: $k\bar{a}diksnes$, $\bar{u}diksnes$ (Kettunen 1938 s.v.).

³ See also the instructive $k\bar{\varrho}$ ' $d\tilde{\varrho}ksmin$ (Viitso, Ernštreits 2012 s.v.).

М.	11 1 o i	Feto	nian	(Laande.	Todock	201	e 17)
IVI	นเยเ	ESLO	11 1 4 11	TLaanue.	Todesk	Z() I	S. V. I

NOM.SG	seidse	katese, katesse, katessa	ütesse, ütese, ühessa, üessa	kümme
GEN.SG	.seitsme	.katsme, katessa	ütesse, ütese, üteseme, ütsme, ühessa, üessa	.kümne
PART.SG	seitset	kateset, .katset, katesemet, katessat	ütesset, üteset ühessat, üessat	kümmet kümment
ORD	(no form given)	.katsmes	(no form given)	.kümnes

The numerals '7' and '10' are given here for the sake of comparison; details of their behaviour do not concern us here. On the other hand, as concerns the inflection of '8' and '9', historically the three types exemplified above are in fact two: the second type (Estonian-Veps) is the same as the first (Finnish-Karelian) after the loss of the final n (see, e.g., Suhonen 1988: 294) or, at least, is historically indistinguishable from it. So in this respect the Finnic languages are split in two groups: those which have no m(V) segment in their oblique stems, and those which have.

It is the former group, including most of the Finnic idioms, that has served as the base for the generally accepted reconstruction. Setälä (1899 : 200, 400) proposed parallel reconstructions for '8' and '9' in Proto-Finnic: *kahteksa-/kahteksama- and ühteksä-/ühteksämä-, but since then the forms with -ma/-me have, as it seems, been ignored or judged as secondary, created, for istance, by analogy with the forms of the numeral '7'.4

However, an opposite scenario is also possible. In this case, the development of the stems 'eight' and 'nine' at the first stage would have been similar to that of other old mA-stems, such as 'heart', 'sour' and the caritives: in the nominative *mA was replaced by n; then in many Finnic languages (but not in Finnish and Karelian) the final n was dropped, as shown in the following table (for NOM and GEN):

	'heart'	'sour'	'nameless'	'eight'	'nine'
Finnish	sydän	hapan	nimetön	kahdeksan	yhdeksän
	sydämen	happaman	nimettömän	*kakdeksama-n	*yhdeksämä-n
Estonian	süda		nimetu	kaheksa	üheksa
	südame		nimetu	*kaheksama	*üheksama
Votic ⁶	süä	apaa	nimetoi(n)	kahesa	ühesä
	süä ~ siiämee	appamaa	nimettomaa	kahesseme	ühesseme

At the next stage, in languages like Finnish or Estonian, the declination of *kakteksan and *ükteksän would have been re-built — probably based on the analogy with '7' and '10' or with just one of them: e.g., in Finnish, instead of kahdeksan: *kahdeksaman, the pattern kahdeksan: *kahdeksan emerged, similar to seitsemän: seitsemän and kymmenen: kymmenen. Only some southern idioms have preserved the old pattern.

 $[\]overline{^4}$ Though Setälä (1899 : 402) believed that, on the contrary, '7' and '10' had acquired their -mV- segments through the analogy with '8' and '9'.

⁵ Presumably, after the loss of the last vowel and a change of *m to *n, but the details of this process are not relevant here.

⁶ The Votic forms are taken from Маркус, Рожанский 2017 and from "Vadja keele sõnaraamat" (VKS 2013).

Such a scenario at least does not seem less plausible than the traditional one.

Let us now turn to Samoyed data.

2. 'Nine' in Samoyed

For 'eight', all Samoyed languages except Selkup use the old compound *kitV(n)- $tett\hat{\sigma}$, which most probably goes back to 'two/twice four' (Janhunen 1977: 71); Selkup expresses 'eight' with expressions like Taz $\check{s}itt\check{\iota}$ $\check{c}a\eta k \check{\iota}t\check{\iota}$ 'two absent ten'. Neither of these is related to Finnic and will not be considered here. Expressions for 'nine' are given below; they are surprisingly different for such a small and relatively young language group:

Nganasan *ŋamiajt'iimə* Tundra Enets⁷ *eesaa* Forest Enets *neesaa*

Yurak näessa (17th century, Хелимский 2000 : 55) Tundra Nenets⁸ xasawa ju? 'Nenets ten', xabej ju? 'Ostyak ten'

Forest Nenets kaśem" ju? 'Nenets ten'

Selkup *ukkir čankitil' köt* 'one missing ten' (Alatalo 2004 : 224;

Кузнецова, Хелимский, Грушкина 1980 : 285)

Kamas amitun (Donner, Joki 1944 : 5a, 194a)

Mator obtańasta, obtanasta 'one missing'; togos (Helimski 1997 :

326, 363)

The Selkup construction is parallel to 'eight' and fully transparent, meaning 'one missing ten', literally 'one be.absent-PT.PRS ten'. Also transparent is the Mator word, which consists of <code>obto</code> 'one' and <code>nasta/nasta</code> 'not having' (Helimski 1997 : 315, 326). Both are not relevant for us here. Mator togos is a borrowing from Turkic.

The Nganasan form can be easily divided, too: it consists of $\eta amiaj$ 'another; one of' and the caritive suffix $-(b)tum\partial$. The latter is not frequent in Nganasan, but does occur, e.g., in $tor\partial tum\partial$ 'useless' (from toru 'profit, benefit'). It is, of course, directly related to the caritives in Finno-Ugric languages, including Finnic -ttOmA-, which was already mentioned in Section 1. A possible cognate of the Nganasan $\eta amiajt'im\partial$ is the Kamas amitun (Janhunen 1977: 19, s.v. * $\ddot{a}m\ddot{a}jt3m\partial$), which is derived from ami 'anderer' ((Donner, Joki 1944: 5a). The suffix -tun is not attested elsewhere in Kamas.

A stem meaning 'another, one of' (PS *ämäj 'anderer, zweiter', Janhunen 1977: 19) is rather unexpected in the word for 'nine'. In both Nganasan and Kamas it is only attested as signalling a member of an opposition, always in the presence of something or someone it is opposed to, as in the following examples:⁹

 $[\]overline{}$ The Tundra and Forest Enets forms are taken from the unpublished Enets dictionary by Eugen Helimski.

⁸ The Tundra and Forest Nenets forms are taken from Lehtisalo 1956: 139b; the transcription is simplified and insignificant variants are omitted.

⁹ The examples from Kamas and Nganasan are taken, respectively, from the INEL Kamas Corpus (Gusev, Klooster, Wagner-Nagy 2019) and the Spoken Nganasan Language Corpus (Brykina, Gusev, Szeverényi, Wagner-Nagy 2018) developed at the University of Hamburg. The glossing and transcription are somewhat simplified.

(1) Kamas

Dĭ-m teinen am-nə-m ami-m karəld'a:n this-ACC today eat-FUT-1SG another-ACC tomorrow 'This one I will eat today, the other one tomorrow' (AA_1914_Head_flk.035 = Donner, Joki 1944 : 97)

(2) Nganasan

Məlitu-tu ŋamiaj, ŋamiaj d'ondala⁹ku buə-tu grumble-PRS another another calmly speak-PRS 'One of them grumbles, the other one speaks calmly' (JSM_090809_Life_nar. 414).

We would rather expect that the numeral 'nine' contains a root meaning just 'one', like in Selkup, Mator or most of the Finno-Ugric languages, but for some reason we have the root for 'another' in this function in Nganasan and Kamas. Maybe this is a reflex of an earlier meaning of *ämäj.

A different explanation of the Nganasan and Kamas forms was given by Klumpp (2005), who points out that Nganasan $-m\partial$ cannot be directly related to Kamas -n and considers the second part of these forms as a direct continuation of the PS *ton' number' (in Kamas), and a derivate of it (in Nganasan), thus interpreting 'nine' as 'another number' (beginning a new counting segment). This accounts better for the meaning of the Nganasan η amiaj and Kamas η ami

Whichever interpretation is true, both divide these numerals in the same way: $\eta amiaj$ - $t'\ddot{u}m\partial$, ami-tun, and this allows us to understand the Enets forms. In both Tundra Enets eesaa and Forest Enets neesaa, as well as Yurak $n\ddot{a}essa$, the first part (Tundra Enets ee, Forest Enets nee) is likely to be an etymological cognate of the Nganasan $\eta amiaj$ and Kamas ami, as pointed out already by Janhunen (1977 : 19, s.v. $\ddot{a}m\ddot{a}jtsm\dot{a}$). In Forest Enets, nee still can be used as a separate word, neq0 though the attestations are very scarce, cf. an example from Helimski's dictionary of Enets:

(3) *nee kie-xe taa* another side-ADJ.LOC reindeer 'reindeer on that side'

On the other hand, its derivates $n\varepsilon\varepsilon ku(ju)/naaku(ju)$ are widely used, see FE and examples from Сорокина, Болина 2009 : 262, s.v. накую ваз бар 'another bank of the river', накую мя 'neighbouring tent', etc.

The segment -saa so far remains opaque; etymologically, it can represent *-sama, --sama, *-sama, or the same combinations with *-w- or zero consonant between the two vowels.

Finally, let us turn to Nenets. The Tundra Nenets $xasawa\ ju^2$ and the Forest Nenets $ka\acute{s}em$ " ju^2 are what Honti (1993 : 202) called "das zweifellos seltsameste Zahlwort in der ganzen uralischen Sprachfamilie". Literally they mean 'Nenets ten', and, as if to confirm that there is not any misunderstanding, 'ten' can be expressed as $luca\ ju^2$ 'Russian ten' (alongside simple ju^2 , though). Such expressions were attested as early as in the 17^{th} century by Gerhard Friedrich Müller in Pustosersk: $ch\check{a}s\check{o}w\check{o}\ j\bar{u}$ '9', $luze\ ju$ '10'.¹¹

 $[\]overline{^{10}}$ Its other meaning is 'left', which presumably has developed from 'another'. 11 Müller's field notes in the Russian State Archives of Ancient Documents (PΓAДA, φ . 199, д. 7, № 513, л. 25).

However, their semantics is really so strange, that one can think of a recent folk etymology (which is also considered possible by Honti (1993 : 203)). On the other hand the final syllables of Tundra Nenets xasawa / Forest Nenets kasama exactly correspond phonetically to Enets -saa (in this case this segment would be reconstructed as PS *-sama), and it may be hypothesised that this expression was primarily something like *xa-sawa ju? 'one-missing ten'. Later the first word was mistaken for xasawa 'man; Nenets', the whole being understood as 'nine = Nenets ten'. Basing on this, in some dialects the new designation luca ju? 'Russian ten' was invented for 'ten'. 12

A similar explanation can be hypothesised for Nganasan. Probably it had initially a form like * $\eta amiaj$ -śumu, a cognate of the Enets and Yurak forms, but its second segment, being totally opaque, was replaced with - $t\ddot{u}m\partial$, yielding the more transparent $\eta amiajt'\ddot{u}m\partial$.

Whatever solution will be accepted for Nenets and Nganasan, it will have no effect on the treatment of the Enets form, where the segment -saa is clearly detachable. The claim of this paper is that this segment — most probably together with the Nenets -sawa/-sama — goes back to PS *-såmå and is directly cognate to Finnic *-ksama.

3. Discussion

The comparison of Finnic *s and Samoyed s would lead to Proto-Uralic *ś (in the traditional notation). It is known that Proto-Uralic *k disappeared from before *s in Samoyed, thus Proto-Uralic *k yielding Proto-Samoyed *t, e.g. in * $kakt\ddot{a}/kekt\ddot{a} > *kit\ddot{a}$ 'two' (Janhunen 1977 : 33, 40). The same must have occurred before Proto-Uralic *s: Proto-Uralic *s: Proto-Samoyed *s, as illustrated by at least one Proto-Uralic suffix: the so-called Connective-Reciprocal *s: Proto-Finno-Ugric *s: Proto-Samoyed *s: (Salminen 2014 : 296—297). The rest of the correspondences are trivial. So, there is basically no problem in the development Finnic *s: Proto-Uralic *s: Proto-Samoyed *s: Proto-Uralic *s: Proto-Samoyed *s: Proto-Samoyed *s: Enets *s: Proto-Samoyed *s: Enets *s: Proto-Samoyed *s: Enets *s:

In Saamic, Proto-Uralic * \acute{s} would have become \acute{c} ; however, the Saamic forms * $\acute{g}kc\bar{e}$ and * $\acute{k}\bar{a}kc\bar{e}$ must have experienced a loss of the middle syllable in * $\acute{i}ktiks\ddot{a}$ - and * $\acute{k}aktiksa$ -, and moreover are likely to have been borrowed into Proto-Saamic from Finnic (Luobbal Sámmol Sámmol Ánte (Aikio)); so the Saamic consonants are in any case unrepresentative.

If we assume that the Proto-Uralic numerals contained *-m-, this would also account for the Permic forms *okmis, *kikjamis, if -s is the ancient nominalisator, as suggested by Napol'skich (Напольских 2012 : 208—209). However, their -m- is explained by Napol'skich's etymology for Permic anyway.

The obvious drawback of the etymology proposed here is that it leaves aside the Mordvin numerals such as the Moksha $\kappa a d p \kappa ca$ '8', $\kappa a e u \kappa \kappa ca$ '9' and Erzya $\kappa a \kappa a \kappa \kappa co$ '8', $\kappa a e u \kappa co$ '9', which have been believed so far to be the only full cognates of Finnic. Proto-Uralic *- $\kappa could$ yield $\kappa could$ in Mordvin; and even an eventual reduction of *- $\kappa could$ for the first segment $\kappa could$ so far. Very tentatively, one can think of an otherwise unattested cognate of TE $\kappa could$ in the change of 'so functionally equal to Nenets $\kappa could$ in Nenets $\kappa could$ in the change of 'so far. Very tentatively, one can think of an otherwise unattested cognate of TE $\kappa could could could could be could could be such as <math>\kappa could could be could$

to s. We have to leave this question open. ¹³ However, the new etymology seems more promising, because, on the one hand, it explains the facts of Finnic better, including the segment -mV in languages like Votic and Livonian; and, on the other hand, it finds them a cognate from Samoyed.

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Abbreviations

DE — E. Helimski, Dictionary of Enets [Manuscript]; **FE** — O. Khanina, A. Shluinsky, Forest Enets wordlist / Словник лесного энецкого языка [Manuscript]; **VKS** — Vadja keele sõnaraamat. 2., täiendatud ja parandatud trükk, Tallinn 2013. http://portaal.eki.ee/dict/vadja/.

NOM — Nominative; GEN — Genitive; PART — Partitive; SG — Singular; PL — Plural; ORD — ordinal numeral; PT.PRS — Present Participle; ADJ.LOC — locative adjective.

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 $[\]overline{^{13}}$ It is worth noting, however, that the Mordvin segment $-ks\partial$ could be compared with Mari $-(k)\check{s}$ in Meadow Mari $\kappa ah\partial au(e)$ '8', $uh\partial eu(e)$ '9' and Hill Mari $\kappa \ddot{a}h\partial a\kappa uu(b)$ '8', $\ddot{u}h\partial e\kappa uu(b)$ '9', whatever the origin of their first parts.

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ПРИБАЛТИЙСКО-ФИНСКИЕ ЧИСЛИТЕЛЬНЫЕ ДЛЯ '8' И '9' И ВОЗМОЖНАЯ САМОДИЙСКАЯ ПАРАЛЛЕЛЬ

В статье рассматривается суффикс, содержащийся в прибалтийско-финских числительных 'восемь' и 'девять' — таких, как эстонские kahe-ksa и ühe-ksa. С учетом форм южных прибалтийско-финских идиомов (водского, ливского и других) предлагается реконструировать праприбалтийско-финскую форму *-ksama/-*ksämä и сопоставлять ее с сегментом -saa в тундровом энецком eesaa, лесном энецком neesaa 'девять', возводя их вместе к прауральскому *-kśama.

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LÄÄNEMERESOOME '8' JA '9' NING VÕIMALIK SAMOJEEDI VASTE

Artiklis käsitletakse 8-t ja 9-t tähistavate läänemeresoome arvsõnade osist -ksa/-ksä (nt. eesti kaheksa ja üheksa). Lõunapoolsete läänemeresoome keelte (eesti murrete, vadja, liivi) vormidest lähtudes rekonstrueerib autor läänemeresoome algkuju *-ksama/ *-ksämä ning eenetsi võimalikule vastele -saa (tundraeenetsi eesaa, metsaeenetsi neesaa 'üheksa') tuginedes uurali algvormi *-kśama.