

## A Uralic Individualizer \*-nV?

### Introduction

In the following, I argue that there are traces in the Uralic languages of an individualizing suffix *\*-n, -nV*, and that hypothesizing the existence of such a suffix helps to explain certain problematic features of Uralic morphosyntax: most notably the element *\*-n, \*-nV* found in personal pronouns, but also, here and there, in the lexicon. I argue that this suffix is best explained as based on a demonstrative stem *\*nV*, agglutinating to the stem, with the function of delineating a definite quantity (singular or contrastive plural) within an indefinite whole. I also argue that a chronologically later agglutination of the same originally pronominal element led, aside from the well-known case of the definite declination in Mordvin, to the emergence of the Finnic-Saami-Mordvin comitative.

### The Uralic personal pronouns

I begin with the problematic nasal element found in personal pronouns throughout the Uralic languages. Finnic notably shows *\*-nA* in first and second person singular (*minä, sinä*), with an *\*-n, -ne* occurring in 3rd person singular (*hän, häne-*) as well as in the interrogative pronoun *ken, kene-* ‘who?’. Inflected forms are based on nasal stems as well (*minu-, sinu-*), with the final vowel being a possible trace of a dual suffix (E. Itkonen 1955, 172–174). Whether the suffixes of the 1st and 2nd person are related to that of the 3rd person and interrogative pronoun is unclear. In Saami, a suffix *\*-n* underlies the singular (*mon*) and dual (*moai < \*mon-ōj*) personal pronouns, but not the plural (*mii*); inflected forms are based on the nasal stem in the dual personal pronouns but not the singular ones (Korhonen 1981, 212–228). In Mordvin, both singular personal pronouns (Erzya *mon*) and plural ones (Erzya *miñ*) show a nasal suffix, while the genitive is based on a stem without the nasal (Erzya *mo-ñ*). In West Mari, we encounter a nasal *-ñ* in 1st and 2nd person singular pronouns, which is absent in the stem underlying the dative (Alhoniemi 2010, 81–82). Udmurt shows a nasal suffix with 1st and 2nd pers. singular pronouns throughout the inflectional paradigm (Csúcs 1988, 138–139). In Komi, a pronoun stem ending in *-n* is used in the accusative, genitive, genitive-ablative and dative cases in the singular 1st and 2nd person, while the other cases

(including the nominative) use a shorter vocalic stem (Rédei 1988a, 120). In Ob-Ugric, a nasal element occurs with all numbers (Vértes 1967, 203; Honti 1993, 122), although in North and East Khanty the nominative may occur without the *-n* (Vértes 1967, 214). As for Samoyed, Janhunen (1977, 86, 147, see also Honti 2012, 125) reconstructs a 1st person singular *\*mân* and a 2nd person singular *\*tân* for Proto-Samoyed, contrasting with a 1st person plural *\*me(-)* and a 2nd person plural *\*te-* (Janhunen 1977, 91, 156). In Nganasan, these forms are preserved as 1st pers. singular *mənə*, dual *mi*, plural *myŋ*; 2nd person singular *tənə*, dual *tii*, plural *tyŋ* (Siegl 2008, 120). As for the 3rd person pronouns in Nganasan, as well as the 2nd and 3rd person pronouns in Nenets and Enets, suppletive forms and – in the case of Forest Enets – even borrowings are used (Siegl 2008). In North Samoyed, forms based on postpositions are used in the oblique cases, with the unmarked form of the personal pronoun standing in for the genitive (Castrén 1854, 343, Siegl 2008, 125; for Nganasan, Wagner-Nagy 2002, 93). Similarly in Selkup, the unmarked 1st and 2nd person pronouns (in all number categories) show identical forms for nominative and genitive (1st pers. sg. *man*, 2nd *tan*; 1st pers. du. and pl. *mee*, 2nd *tεε*), with the inflected forms based on a nasal stem (Helimski 1998, 564. In Kamassian, 1st and 2nd person pronouns exhibit a nasal suffix throughout the case paradigm (Donner 1944, 142–143).

Thus the nasal suffix seems to be to some extent sensitive to case (case-marking may or may not use a nasal stem) and number (the nasal suffix occurs most frequently in singular personal pronouns, but in some groups also in dual and plural ones). At the same time, it appears to be neither a case suffix nor one of number.

This variation is paralleled by the variation in vowel quality in Uralic personal pronouns, the Finnic, Permic and Ugric languages point to a singular personal pronoun stem containing an illabial front vowel, Mordvin, Samoyed and Saami to singular personal pronoun stems containing a labial back vowel (Kulonen 2001, 180). Plural personal pronouns appear to be based on front vowel stems in all Uralic languages. Thus Janhunen (1982, 32–33) reconstructs the singular pronouns *\*mun*, *\*tun*, *\*sun* and plural pronouns *\*mi*, *\*ti*, *\*si*; Honti (1993, 124; 1995, 66; 2012, 123) singular front-vowel stems; in a recent paper, Janhunen (2013, 214) agrees with Honti. Kulonen (2001, 180) proposes an ingenious solution in which the Uralic personal pronouns were originally based on personal suffixes (as opposed to the traditional explanation of the Uralic verbal and possessive personal suffixes as agglutinated pronouns): the labial vowels then may be based on personal suffixes in stressed position, the illabial vowels on personal suffixes in unstressed position (where labial vowels were not allowed in PU). This, however, merely raises the question of what the personal pronouns in Pre-Uralic actually were. One solution would be that they were based on personal suffixes attached to demonstrative stems, as in Eskimo-Aleut (Fortescue 1998, 98), however, as such demonstrative stems were most likely monosyllabic, the variety in vowel quality cannot be explained in this manner.

It seems obvious, on the other hand, that the variation in vowels in personal pronouns is connected to a similar variation in demonstrative pronouns,

e.g. \*tä, \*ta ‘this’, \*to ‘that’ (Rédei 1973, 311–315), or indeed the interrogative stems \*ke and \*ku, which still coexist in Finnic as *ken/ku-ka* ‘who?’. Indeed, Honti (2012, 124) argues that demonstratives with labial vowels such as \*to induced a sound change in the 3rd person pronoun (\*se > \*so), which then spread to the dual forms of the other personal pronouns. While labial vowels seem to be clearly associated with distal demonstratives, there is no clear indication of the semantics underlying the variation between labial and illabial vowels in personal and interrogative pronoun stems. Ablaut is hardly known as a grammatical device in Uralic, even if irregular variations and shifts between front and back vowels, or unrounded and rounded vowels, do occur in Uralic etymology. Perhaps the variation is ultimately a remnant from Pre-Uralic times, its determining factors having become obscure by the time of PU (Korhonen 1980, 107). This vowel variation would then be pressed into service to signify distal/proximal contrasts in the demonstrative, as well as – at least in some later languages – singular/plural contrasts in the personal pronouns. It should be noted here that variation between labial and illabial vowels is known from Proto-Indo-European personal pronouns (Shields 1986, 18, Elmegård Rasmussen 1987, 266) and demonstrative pronouns (Beekes 2011, 226) as well.

The reconstruction of the nasal element is not unproblematic. The Finnic nominative forms suggest \*-nV, with the exception of the 3rd person sg. pronoun; but the vowel may be secondary. Apocope in Permic and Ugric means that the nasal element in these languages could in principle be related to \*-nV; Saami and Mordvin, however, rather point to \*-n. For Samoyed, Nganasan shows final vowels (*mənə, tənə*) (Siegl 2008, 120), although Janhunen (1977, 86, 147) reconstructs \*mān, \*tān for Proto-Samoyedic. Katzschmann (2008, 384) follows Janhunen and postulates that the Nganasan final vowel may have its roots in a deictic particle. If the nasal element is derivational in origin, there is much to be said for reconstructing it as \*-nV in order to fit with canonical Uralic phonotaxis (Rédei 1998, 343), whereas an inflectional ending could be either \*-n and \*-nV. On the basis of Saami and Mordvin, \*-n would seem to be preferable. In Finnic, the inflected forms are in any event compatible with \*-n: the stems *minu-* and *sinu-* are based on underlying \*min-, \*sin- with the subsequent vowel possibly originating in a dual suffix (E. Itkonen 1955, 172–174). Thus we are dealing with the following possible personal pronouns in Proto-Uralic:

Singular:	*mun,	*mu,	*min,	*mi
	*tun,	*tu,	*tin,	*ti
	*sun,	*su,	*sin,	*si
Plural:	*mi			
	*ti			
	*si			

Singular and plural personal pronouns thus appear to be distinguished by the presence of a labial vowel, though not always, and by the presence of a nasal element, though not always that, either. This raises the question of whether there

actually was a distinction between singular and plural personal pronouns in Proto-Uralic. Honti (1997, 32–33) argues that the plural personal pronouns may have sported a suffix *\*-k* in Finno-Ugric, but not necessarily in the Uralic proto-language; Janhunen (1977, 91, 156) reconstructs Proto-Samoyed plural personal pronouns without such a suffix. A dual suffix *\*-n*, retained in the Ob-Ugric languages, may have been used as well (Janhunen 1982, 30; Honti 1997, 16). However, if there was no distinction in Proto-Uralic personal pronouns between singular and plural, as argued for example by Rédei (1998, 341), it would be implausible to assume a marked dual (Corbett 2000, 38–39).

Could the suffix *\*-n* signify a marked singular instead? While the nasal element *\*-n* is generally reconstructed with singular personal pronouns only, it surely is not a singulative suffix as such. A number of researchers (Ravila 1941, 74; Rédei 1998, 341; Kulonen 2001, 178) have argued vigorously against reconstructing a marked plural for personal pronouns, such as found in Finnic (e.g. Meänkieli and North Finnish *met, tet, het*) (Laanest 1982, 190) and Saami (Korhonen 1981, 209), and their arguments would seem to count a fortiori against assuming a marked singular. The singular and plural pronouns are generally held to be suppletive, rather than distinguished by a marked morphological number (Vértes 1967, 207; Honti 1995, 63; Kulonen 2001, 178). That may be so, but they are suppletive in a very different sense than the personal pronouns in Indo-European (e.g. Latin 1st pers. sg. *egō*, 1st pers. pl. *nōs*): the singular and plural series certainly appear to be etymologically related, and as far as the front-vowel sg. *\*mi*, *\*ti* and the plural *\*mi*, *\*ti* are concerned they are identical. Furthermore, there are languages in which plural personal pronouns are formed by adding plural markers to singular stems (Corbett 2000, 76). Thus, simply denying the possibility of number marking in PU personal pronouns on the basis of their suppletive nature fits poorly with the shape of the forms that have actually been reconstructed, as well as with typological facts. This said, it would be typologically odd for an inverse marking system (e.g. singular *-n*, plural *-ø*) to occur in personal pronouns rather than general nouns; according to Corbett (2000, 159–161), inverse number marking systems would be expected to occur at the lower end of the animacy hierarchy, not the higher. Typological plausibility is of crucial importance in reconstruction (unlike in real-life languages, where a counterexample is precisely that); on this basis, as well as the presence of stems without the nasal suffix in singular personal pronouns in the Uralic language, I conclude that it is unlikely the *\*-n* was a singulative.

Rather, it may indeed be the case that, with the Proto-Uralic tendency towards head-marking of number, possession and verbal arguments (Ravila 1941, 96, 111–112; Bartens 1981, 102–103), the personal pronouns of PU were, as suggested by Ravila (1941, 74) and Rédei (1998, 341), non-distinct with regards to number. The pronouns with labial vowels appear to be restricted to singular forms, while perhaps originally competing with front-vowel forms in the same way labial-vowel and front-vowel forms of demonstrative pronouns still do in Uralic languages: we may speculate that the labial vowel could have had an emphatic or individualizing function, without this amounting to a singular-plural

opposition in PU. It should be noted, however, that there are typological problems with supposing the absence of a number distinction in personal pronouns (at the higher end of the animacy hierarchy), while at the same time supposing the presence of marked number in nouns (lower on the animacy hierarchy) (Corbett 2000, 55, 122). While Ravila (1941) argued that nouns in Proto-Uralic may not have been inflected for number, Honti (1997) strongly argues for the existence of such an inflection, and a range of number suffixes can indeed be reliably reconstructed for Proto-Uralic. This is a genuine puzzle: we may not quite be able to reconstruct marked number suffixes, such as the dual \*-n and the plural \*-k, for Proto-Uralic personal pronouns. Distinctions in vowel quality and in the presence or absence of a nasal suffix \*-n do seem to interact with number in some fashion, but not in a way that allows us to isolate any specific element as ‘singulative’ or ‘plural’.

## Nasal suffixes in other pronouns and nouns

As already mentioned, interrogative and other pronouns may show a similar nasal element: thus *ken?* ‘who?’ in Finnic, similarly Udmurt *kin*, *kiñ* ‘who’ (Rédei 1988b, 362); Khanty demonstrative *in* (Vértes 1967, 214, 226), Hungarian *-n* in *azon* ‘this here (emph.)’, etc. (Lehtisalo 1936, 388–389); also Mordvin *kona* ‘which of these two (or more)?’, *tona* ‘that one’ (Bartens 1999, 116); Proto-Samoyedic \**ku* pron. interr. ‘was, welcher’, Nganasan *kunie* (\**ku-nä*) id. (Janhunen 1977, 75), *tā-*, composite *tānā-* ‘dieser, jener, der’ (Janhunen 1977, 144). Janhunen (1982, 29) postulates that pronominal suffixes with *-n*, *-nV* as well as *mV-* (e.g. Finnish *tämä* ‘this’) may have had, aside from an intensification of deixis, the function of bringing pronouns in line with canonical Uralic bisyllabic word structure.

The UEW lists a number of lexical items showing a suffix \*-nV, all of which are more recent than Proto-Uralic. These are: FU \**kupe-na* ‘fish bladder’, FU \**ike-ne* ‘gums’, FU \**kāme-ne* ‘hollow of hand’, FP \**irʒnɜ* ‘copper’, doubtfully FP \**sowɜ-nɜ* ‘pole’, FP (possibly FU) \**jäse*, \**jäsne* ‘member’ and FW \**küme(-ne)* ‘10’, as well as FP \**lowna* ‘day, midday’. The last item appears to be a clear derivation of FP \**luwe* ‘south’; however, if \**lowna* is indeed derived, the *-nA* element here might well be a Proto-Uralic locative which does not necessarily have anything to do with the *-n*, *-nV* with other nouns. Semantically, FP \**irʒnɜ* ‘copper’, which has a rather narrow spread in Mari and Permic – Viitso (2012, 191) names a Mansi cognate as well – appears to be a good loanword candidate, although the suggested loanword etymologies from Baltic and Aryan languages appear to be problematic (Viitso 2012, 191–192). What the remaining lexical items have in common is that they all signify part of an inherent duality or plurality. FU \**kāme-ne* ‘palm of hand’ and \**jäsne* ‘member’ signify one of a paired (or quadruple) body-part, and the same goes for FU \**ike-ne* ‘gums’, as gums tend to appear in both the upper and lower jaw. FU \**kupe-na* ‘fish bladder’ signifies a body-part that is paired in many species of fish, with one larger,

more prominent sac and one that is smaller. FP *\*sow3-n3* may be also grouped with this, as poles often tend to be part of a fence. FW *\*küme(-ne)* ‘10’, finally, is more problematic in this regard. The connection with *\*käme-ne* seems obvious at first sight, but runs into serious phonological and semantic trouble (Hahmo 1994, 57); if the suffix *-ne* had a dual meaning, e.g. *\*küme-ne* ‘both hands’, at least the semantic issues would be resolved. The explanation of the suffix as signifying a constituent part of an inherent duality or plurality is of course highly speculative, as we lack reconstructed forms such as *\*jäse-* ‘set of limbs’ or *\*käme-* ‘both hands’.

There is, of course, a dual suffix *\*-n* in Proto-Uralic verbal inflection and possessive suffixes, possibly also personal pronouns, contrasting with a dual *\*-k* for nouns. The dual in nouns may be related to the numeral *\*kakte-* ‘two’; the origin of the dual *\*-n* is hitherto unknown (Honti 1997, 15–19). It occurs in the Ob-Ugric languages and Saami (Ravila 1941, 3–5). While in Ob-Ugric *\*-n* is used with pronouns as well, in Saami it is restricted to verbal and possessive suffixes; the Saami pronominal *\*-ōj-* is restricted to Saami, with traces in Finnic as well (E. Itkonen 1955, 172–174). Of the lexical items mentioned above, FW *\*küme-ne* ‘10’ would seem to be compatible with a dual reading of the *\*-nV* suffix, as would potentially FU *\*kupe-na* ‘fish bladder’ and FU *\*ike-ne* ‘gums’, but hardly FU *\*käme-ne* ‘palm of hand’ and FP *\*jäsne* ‘member’, which signify a member of a pair. FU *\*kupe-na* ‘fish bladder’ and FU *\*ike-ne* ‘gums’ are in principle compatible with either reading. Furthermore, a dual reading of the nasal suffix in pronouns such as Hungarian *azon* ‘this here (emph.)’ or Mordvin *kona* ‘which of these two (or more)?’, *tona* ‘that one’ does not make much sense.

These semantic difficulties, and the obvious problem that the Uralic dual suffix for nouns is *\*-k*, rather than *\*-n*, speak against a dual reading of the suffix in nouns such as FP *\*jäsne* ‘member’. What, then, of personal pronouns? Could forms such as *\*mu-n*, *\*mi-n* originally have been dual pronouns, in paradigmatic opposition to both singular *\*mu*, *\*mi* and plural *\*mi-k* (the presence of a dual, as mentioned above, implies the presence of a distinct plural)? We would need to assume that the dual forms spread into the singular series already in Proto-Uralic. This is in principle possible, the use of dual and plural personal pronouns for singular referents, for reasons of politeness or taboo avoidance, is widely attested (Corbett 2000, 224), and it is worth noting that a process of this kind may have occurred during the emergence of the Finnic personal pronoun system (E. Itkonen 1955). However, we would at the same time have to assume that dual marking was retained in Proto-Uralic, as it is in Ob-Ugric: e.g. East Khanty 1st person sing. *mä*, acc. *män-t*; du. *min*, acc. *min-t*, pl. *məŋ*, acc. *məŋ-ə* (Filchenko 2007, 112). Such an explanation would thus be rather convoluted. Furthermore, assuming the *\*-n* suffix in personal pronouns to be a dual would mean abandoning connecting it to the lexical items mentioned above. Finally, the origins of the dual *\*-n* itself are unexplained (Honti 1997, 19). For these reasons, I believe this path should be abandoned in favor of an alternative explanation.

I suggest instead that Proto-Uralic sported an individualizing suffix *\*-n* (in pronouns), *\*-nV* (in nouns and perhaps to some extent pronouns), which served to identify one particular referent out of many. Its meaning was equivalent

to that of the Mordvin interrogative *kona* ‘which of these two (or more)?’. In the Uralic personal pronouns, the suffix originally served to identify one (or perhaps two) discourse participants out of many: *\*mu-n* or *\*mi-n* could mean, depending on the context, ‘I, here’ or ‘we two’ or ‘we, over here’, as opposed to a more general *\*mu* or *\*mi*, which was originally neutral as to number. More speculatively, *\*-n* with the 1st person pronoun stem *mu-/mi-* could originally have signaled exclusivity, specifically in the way that Bickel and Nichols (2005, 51) identify as one of three possible systems of marked clusivity, namely the kind found in Belhare: here, the first person singular is formally marked as ‘exclusive’. Likewise, Proto-Uralic at some stage could have sported a system in which *\*mu-n* ‘I’ contrasted with *\*mi-n* ‘we (excl.)’ and *\*mi* ‘we (incl.)’. From this base, the suffix could have spread to other pronouns and gained a broader individualizing or emphatic function. This is of course highly speculative: problematically, marked clusivity is linguistically rare in Eurasia (Nichols and Bickel 2005, 55), though not unknown (see Janhunen 2013, 218 on Manchu), and does not occur in any modern Uralic language. However, it would provide a way to account for the fact that in most Uralic languages, nasal suffixes are most strongly associated with singular personal pronouns, while in some branches (such as Mordvin), plural personal pronouns based on *\*mi-n*, *\*ti-n* nevertheless occur.

It should be noted here that I am assuming, with Kulonen (2001, 178–179) and Rédei (1998, 344) but against Honti (1995), that Proto-Uralic personal pronouns did not have much of a case inflection. Genitive *\*mu-n*, *\*tu-n* (which appears underlie the Saami personal pronouns) would be homophonous with the *-n* marked form – unless indeed the original suffix was *\*-nV*. The nominative and genitive personal pronouns, however, are kept distinct in Saami (Korhonen 1981, 204) and in Mordvin, where the genitive suffix is a palatalized *-ń*: thus nom. *mon* ‘I’, gen. *mo-ń*. This implies, however, that the current pronominal genitive is a relatively recent development, even if it may have replaced a prior genitive. Genitive forms based on a stem extended with *-nV* are present in Permic and Ugric, although the Finnic *minu-n*, as mentioned above, may represent a dual stem. It might be simplest to assume that uninflected forms such as *\*mu* (and perhaps also *\*mun*) functioned in possessor phrases as well, especially as the possessive relationship was marked by a possessive suffix in any case (with the pronoun only appearing in an emphatic role). A similar situation is found in Samoyed languages such as Selkup: the genitive and nominative forms of the personal pronouns are identical (Helimski 1998, 564). I would suggest, however, that individualizing forms such as *\*mu-n* might have been more common in focus than in topic positions, as the need to specify a discourse participant would be greatest when that participant was first introduced.

Finally, it should be mentioned that a somewhat similar example of the formation of singular personal pronouns by adding a deictic suffix to a plural stem may have existed in Hittite: according to Shields (1998, 49–50), the Hittite 1st person sing. pronoun *uk* was formed on the basis of a plural stem *\*we-* and a deictic suffix *\*-k*. Shields (2009, 59) argues that the derivation of personal pronouns through the affixation of deictic particles has played a wider role in Indo-European.

## The origin of the individualizer \*-n, \*-nV

Assuming this hypothesis – that the nasal element in pronouns as well as in nouns such as FP *\*jäsne* ‘member’ is an individualizer, the original function of which perhaps is best preserved in forms such as Mordvin *kona* ‘which of these two (or more)?’, *tona* ‘that one’ – is correct, what are the origins of the suffix? The problem, of course, is that the Uralic languages are exceedingly rich in suffixes with \*-n or \*-nV.

For reasons outlined above, I believe that the origins of the suffix should not be sought in the pronominal dual \*-n. Perhaps the dual \*-n may instead be based on an exaptation of the individualizer in the early history of Ob-Ugric, with an original meaning of restricted plurality or paucality. A locative reading (PU locative \*-nA) might make sense, just about, with the emphatic demonstratives such as Mordvin *tona*, as demonstratives may incorporate expressions of locality in various languages (cf. Swedish *den här* lit. ‘this here’, Afrikaans *hierdie* lit. ‘here-this’) (Diessel 1999, 74–75). Such an explanation, however, would be very hard to extend to personal pronouns and nouns. Another alternative is a diminutive \*-n, \*-nV which may be present in such Finnish lexical items as *pähkinä* ‘nut’, *ahven* ‘bass’ (Lehtisalo 1936, 119–122; Hakulinen 1979, 132–133). Diminutives have been known to be involved in the emergence of singulative suffixes cross-linguistically (Mathieu 2012, 674, 676). That said, of the lexical items mentioned above, a diminutive suffix seems possible for FU *\*kupe-na* ‘fish bladder’ but hardly for the others.

Instead, I would argue that the individualizing suffix in question has its roots in a Uralic demonstrative *\*nA*, *\*ne* and distal *\*no*, a connection made implicitly by Fortescue (1998, 143). Rédei (1973, 312) reconstructs this to Finno-Permic and perhaps further back; Janhunen (1977, 105) reconstructs a demonstrative pronoun *\*nɜ* ‘dieser, jener’ to Proto-Samoyedic. My reason for relating the individualizer to a Uralic *nV*-demonstrative is that the latter matches the ambiguity with regards to number of the former. Recall that the nasal element in Uralic personal pronouns is mostly restricted to singular forms, but not entirely: in Mordvin, for example, both singular and plural personal pronouns show the nasal element. For this reason, I postulated that PU *\*mu-n* or *\*mi-n* could have originally meant something like ‘we (excl.)’ in addition to ‘I’. With the lexical items, the individualizing suffix would single out one element out of a restricted plurality in FP *\*jäsne* ‘member’ and FU *\*käme-ne* ‘palm of hand’, but is at least compatible with a dual meaning with FU *\*ike-ne* ‘gums’ and perhaps also FW *\*küme-ne* ‘10’ if the latter word is indeed related to FU *\*käme-ne* with a meaning such as ‘both hands’. As for the Uralic *nV*-demonstratives, they have plural meaning in the Finno-Permic languages (Bartens 1999, 114), with the exception of Mordvin *nuno* ‘that’, but the Proto-Samoyedic demonstrative reconstructed by Janhunen (1977, 105) is singular in meaning. If indeed the Finno-Permic and Samoyedic forms are related, it could – but note that this is strongly contested by Honti (1997, 34; 2006, 86–87) – have originally been neutral with regards to number, with the corresponding *tV*-demonstratives signifying singular meaning.



## Agglutination of demonstratives and the Finnic comitative

Another reason for preferring a reading of the suffix \*-n, \*-nV as an agglutinated demonstrative is that the Uralic languages provide a variety of examples of demonstrative roots agglutinating and grammaticizing into various functions. There is, first of all, the hypothesis, defended in detail by Honti (1997, 24–26) that the PU plural marker \*-t developed from a demonstrative \*tV. The usage of singular demonstrative roots to mark discrete, definite plurality (as opposed to a more indefinite ‘general number’) is cross-linguistically attested (Diessel 1999, 137–138) and Honti (1997, 24–25) provides a detailed argument on how the marker was reanalyzed from a definiteness marker into a plural marker through an intermediate step of its usage in phrasal coordination. Honti (1997, 34) also argues that a plural \*-n used in the possessive paradigm in the Uralic languages had its roots in an agglutinated demonstrative \*nV. Notably, Honti (1997, 34) explicitly argues for this demonstrative to have been plural already in Proto-Uralic, whereas in this paper, I base myself on the possibility that \*nV was originally neutral in number.

Another alleged case, also involving the \*nV demonstrative at issue here, is that of a number of case markers in Ob-Ugric, such as the Mansi elative -nal and the South Mansi/East Khanty comitative -nat, -nät (Rédei 1973, 312, Kálmán 1988, 406–407). Honti (2006), however, argues convincingly that these markers rather have their roots in postpositions involving \*nā ‘Nähe, Seite’. A well-known and uncontested case, however, is that of the Mordvin definite declension, which is based on the agglutination of demonstrative pronouns \*še and \*te in the singular, \*ne in the plural: thus Erzya *moda-t* ‘lands’ (indef.), *moda-tne* ‘lands’ (def.). A similar agglutination of demonstrative pronouns appears to be incipient in Veps (Kettunen 1960, 208; Tauli 1966, 120).

As another instance, I would suggest the comitative of the Western Uralic groups Finnic, Mordvin and Saami. The Finnic comitative suffix \*-ine(k)+Px, used always with a plural stem, is represented only in Finnic, Karelian and Votic (Laanest 1982, 172), but it has a counterpart in Saami (Korhonen 1981, 224–225; Sammallahti 1998, 67), where, like Finnic, the ending contains an -i-, and in Mordvin: -*nek* (E), -*ñək* (M) which occurs only in the indefinite declension paradigm and thus not with a marked plural (Laanest 1982, 172, Bartens 1999, 99–100). According to the traditional viewpoint (Kettunen 1956, 17; Hakulinen 1979, 107; Korhonen 1981, 225; Sammallahti 1998, 67), the \*-nV element in the comitative ending was originally identical with the locative \*-nA. The expression \**mees vaimoina* ‘man-NOM wife-COM’ would thus have meant something like ‘the bewifed man’ or ‘the man, in a bewifed state’, or, in a more concrete sense ‘the man, among his wives’, analogously to the usage of the Finnish essive -nA in adverbials of state: *opettaja-na* ‘as a teacher, in the function of a teacher’. This grammaticalization path is notably well-attested cross-linguistically (Stolz, Stroh and Urdze 2006, 360). The -i- of the comitative in Finnic and Saami has been seen as identical to a derivational -j- in adjectives, ultimately the same as

the plural *\*-j-* used in oblique cases (Hakulinen 1979, 122). This traditional explanation suffers from the problem that it fails to explain the variation in vowels encountered with the comitative suffix: Inari Saami and most Finnic languages would point to *\*-ne*, but the other Saami languages, as well as Votic, to *\*-nA*. The presence of a final *\*-k* in Finnic and Mordvin also seems hard to explain. An alternative solution, which does not encounter these problems, is that the comitative suffix is based on an agglutinated *\*nV*-demonstrative with a deictic, disambiguating function. Various vowel qualities occur in this demonstrative (*nA*, *ne*, *no*), and the variety encountered in the vowel of the comitative suffix could simply reflect this variation. The final *\*-k* could then simply be the remnant of a plural suffix of the kind which is analogously (and pleonastically) attached to the demonstrative pronoun in North Finnish *ne-t*, Estonian *nee-d*. Notably, in no language do we encounter a contrast between singular and plural forms of the comitative suffix. This contrast is also absent, however, for the historical reflex of the locative *\*-nA* in Saami (the essive).

Semantically, this explanation would make sense if we assumed that the original function of the agglutinated demonstrative/individualizing element *\*-nV* was to distinguish asyndetic coordination from apposition: for example *\*mun icä* could potentially mean ‘I and father’ as well as ‘I, father’, whereas the form *\*mun icä-nä* would distinguish the referent of the second part from that of the first one: ‘I and father’. The same disambiguation task is performed by the possessive suffix which occurs obligatorily with the comitative in Finnic (though not in Saami or Mordvin). The original suffix would thus have been purely pragmatic, and did not distinguish any specific syntactic function, only later grammaticizing into a case ending. It should be noted here that coordinating conjunctions may not yet have been available at this stage: for example, Finnic *ja* ‘and’ is based on a Germanic loan. As for the *\*-j-* encountered in Saami and Finnic, the explanation I would suggest is not that very different from the traditional one, namely that the *n*-suffix was attached to a plural oblique stem, except that it might have been a straightforward plural genitive attribute rather than an adjectival attribute: *\*vaimoj nä* ‘of women – this one’ might have competed with a singular *\*vaimo nä* ‘this woman, here’ during a nascent stage of the construction. In other words, I suggest that the comitative arose from the usage of a suffix *\*-nV* (based on an agglutinated demonstrative), with an original function that closely parallels the usage of the dual in Ob-Ugric and some Samoyedic languages, e.g. Khanty *imeḡan ikeḡan olləḡan* ‘There lived an old woman and an old man (lit. old woman-DU old man-DU live-DU)’ (Honti 1997, 46–47; Corbett 2000, 228). In a similar fashion, the originally demonstrative suffix *\*-nV* that underlies the comitative would have originally functioned in phrasal coordination.

The upshot of this alternative explanation is that it provides a possible explanation for the variation in vowel quantity and the presence of a final *\*-k* in Finnic and Mordvin. Furthermore, the fact that the comitative ending *\*(-j)nV-(k)* does not contrast in number in any language where it occurs finds an explanation in the notion that the demonstrative element *\*nV* may well originally have been neutral with regard to number and the head of the clause. The downside of the

explanation is that it does not correspond to any of the known grammaticalization paths of comitatives, whereas the grammaticalization of spatial expressions to comitatives is well-attested (Stolz, Stroh and Urdze 2006, 360). That said, the process I postulate here is not really an instance of grammaticalization. Rather, the comitative was co-opted into the case system after an originally purely pragmatic usage of a suffix \*-nV was marginalized, and to some extent idiomatized, after the emergence of alternative means of expressing phrasal coordination.

## Synopsis and Eurasian excursions

The hypothesis presented above is, briefly, that in Pre-Uralic times, a demonstrative stem \*nV (neutral in number) agglutinated to personal and some demonstrative and interrogative pronouns with an individualizing function. With personal pronouns, the resulting suffix may originally have marked clusivity with the 1st pers. pronoun before spreading to other persons. Later, the suffix was added to some nouns to mark a part or constituent of some kind of definite, discrete plurality, e.g. FP *jäsne-* ‘member’. These nouns have a rather narrow distribution in the West Uralic languages, and the use of \*nV as a noun suffix may thus have been a late Uralic dialectal phenomenon. The same goes for the emergence of the Finnic-Saami-Mordvin comitative, which I argue above to have resulted from the use of \*nV as an individualizing, determining suffix in phrasal coordination.

I would now like to briefly address the occurrence of similar suffixes in the surrounding language families. This for two reasons: first, the occurrence of the personal pronouns 1st. \*m- 2nd \*t- as well as the demonstrative roots \*t- and interrogative \*k- have been claimed to indicate a deeper genetic relationship between for example Indo-European, Uralic and Eskimo-Aleut (for example Elmegård Rasmussen 1987, 257; see also Janhunen 2013, 211–212). Secondly, precisely the suffix at issue here, an individualizer \*nV, has been argued to be a parallel between Uralic, Chukotko-Kamchatkan and Eskimo-Aleut by Fortescue (1998, 48, 97, 110). I do not seek to endorse (or, for that matter, repudiate) such long-range genetic connections, nor do I mean to state that the occurrence of unexplained nasal elements in pronominal stems is, in and of itself, evidence of such connections. Instead, I would argue that they constitute a possible falsifier for the argument presented above: that the nasal element in pronouns (and some nouns) in the Uralic languages can be plausibly explained within Uralic. If similar phenomena occur widely in the surrounding families, however, we would have to consign it to the same category as the 1st pers. *m-*, 2nd pers. *t-* pattern in personal pronouns, or the alternation between labial and illabial vowels in pronouns: similarities that may reflect a common genetic inheritance that is too distant to be subject to demonstration by comparative linguistics. The notion that the affixation of \*nV was a Proto-Uralic or Pre-Proto-Uralic affair would in any case have to be abandoned.

First, Yukaghir. The Yukaghir system of personal pronouns, with Proto-Yukaghir 1st pers. sing. *mət* (Nikolaeva 2006 nr. 1221), 2nd pers. sing. *tət* (ibid.

nr. 2410), 1st pers. pl. *mit* (ibid. nr. 1238), 2nd pers. pl. *tit* (ibid. nr. 2423) do somewhat resemble the Uralic personal pronouns, but there is no sign of a nasal suffix in inflection (Maslova 2003b, 234). The interrogative pronoun *kin* ‘who’ (Nikolaeva 2006 nr. 826) and *ten* ‘this’ (ibid. nr. 2400) end in a nasal, but this is part of the stem; a nasal suffix *-n* may be used with demonstratives in Tundra Yukaghir to form deictic presentatives that “serve to link the clause to a state of affairs in the situation of speech“ (Maslova 2003a, 39), e.g. *te-n* ‘this here’. Kolyma Yukaghir employs a suffix *-Ńn* to form pronominal demonstratives from attributive demonstratives, e.g. *taŃ* ‘that (attrib.)’, *tawun* ‘that (pronominal)’ (Maslova 2003b, 240). Personal pronouns in Eskimo-Aleut are formed historically by personal suffixes on an originally demonstrative element (Bergsland 1997, 56–57, Fortescue 1998, 98), and Fortescue (1998, 98) reconstructs such a system for Proto-Chukotko-Kamchatkan as well. Fortescue (1998, 97, see also Bergsland 1951, 171) reconstructs a singulative *\*-na* for demonstratives and interrogatives in Proto-Eskimo-Aleut, e.g. *u-na* ‘this’, Eskimo *kina*, Aleut *kiin* ‘who’ (Bergsland 1951, 175; Fortescue 1998, 48) and compares this to the nasal suffixes of Uralic treated here (Fortescue 1998, 110). If, like Fortescue (1998), one subscribes to a Uralo-Siberian language family, the agglutination of a singulative *\*-nV* to interrogatives and demonstratives may have occurred at a common protolinguistic stage, but the agglutination of *\*-nV* to personal pronouns would have happened during (Pre-)Proto-Uralic, as there is no trace of this phenomenon in Yukaghir. Since there is no demonstrative stem *nV* in Yukaghir (and Fortescue (1998, 143) connects the PU pronominal stem *\*nV* and the *-nä* of Finnic personal pronouns directly with the Eskimo-Aleut singulative *\*-na*) the hypothesis I have outlined in this paper would have to be rejected or strongly modified.

Ket provides no points of comparison. There is no nasal element in pronominal inflection, and in any event Ket personal pronouns do not resemble Proto-Uralic ones in the slightest (Georg 2007, 163–165). With Indo-European, things are slightly different. Demonstrative and interrogative pronouns do not show any nasal element in inflection, and there is no putative cognate for the PU demonstrative *\*nV* (Beekes 2011, 226; 230). With personal pronouns, reconstructed by Beekes (2011, 232–233) as 1st pers. sing. *h<sub>1</sub>eǵHom*, acc. *h<sub>1</sub>me*, 2nd pers. sing. *tiH*, *tuH*, 1st pers. pl. *uei*, acc. *nsmé*, *nōs*, 2nd pers. pl. *iuH*, acc. *usmé*, *uōs*, the genitive and accusative of Avestan and Old Church Slavic suggest *h<sub>1</sub>mene*, which is reconstructed by Beekes (2011, 233) as an alternative form of the PIE genitive. This *\*-ne* element does not occur with the other personal pronouns; Shields (1986, 15) believes it to be a pleonastic combination of a case suffix and an oblique suffix.

It is only with the ‘Altaic’ languages (Turkic, Mongolic and Tungusic) that we find something puzzlingly similar to Uralic, as pointed out by Stachowski (2001, 217) and more recently by Janhunen (2013, 214). In Turkic, a nasal element is used in the inflection of personal pronouns, e.g. Chuvash 1st person sing. nominative *epě*, gen. *man-ăn* (Vovin 2011, 255) and the same is found in Tungusic (Evenki *bi*, dat. *min-du*) (Vovin 2011, 263) and Mongolic (Middle Mongolian

*bi*, gen. *min-u*) (Vovin 2011, 265). 2nd person pronouns behave in similar fashion, e.g. Chuvash *esě*, gen. *san-ăn* (Vovin 2011, 265). Vovin (2011, 265) argues convincingly that the Tungusic and Mongolic pronouns should be considered borrowings from Bolghar Turkic. Notably, the alternation between the stop and the nasal in the anlaut of the 1st pers. pronoun makes sense from within Turkic as a regressive assimilation to the following nasal in inflected forms, but not in Tungusic or Mongolic. Janhunen (2013, 221), like Vovin, rejects common genetic inheritance as an explanation for the similarities among personal pronouns in Turkic, Mongolic and Tungusic, with the intriguing argument that they are “too similar”: a distant genetic relationship would have led to more wear and tear than what we are actually seeing. However, Janhunen is also skeptical towards borrowing explanations, preferring instead explaining the similarities through ‘shared drift’: the gradual mutual accommodation of languages in close contact (Janhunen 2013, 222–224).

A similar nasal element occurs with demonstrative pronouns in Turkic (Erdal 2004, 191), e.g. Old Turkic *bo* ‘this’, gen. *munuŋ*, loc. *bunta/munta* (Erdal 2004, 199). The nasal element in Turkic appears to be a stem formant used for inflection – something which Janhunen (1982, 29) suggests was one of the functions of the \*-nV suffix found with Uralic pronouns. The resulting system is curiously reminiscent of Uralic languages such as Komi and Khanty, where a nasal element appears in some or all of the inflected forms, but not in the nominative.

Relating the pronominal nasal element in Turkic to that in Uralic, however, runs into insurmountable difficulties, particularly if the notion of an Altaic genetic relationship is rejected and Vovin’s (2011) borrowing explanation accepted. For the first, there are important structural differences between the phenomenon in Turkic and that in Uralic, in the Turkic languages, \*-n- is used as a stem formant in case inflection, but is originally absent from the nominative (Erdal 2004, 196); in the Uralic languages (with the exception of Komi and Khanty), the nasal element occurs most consistently in the nominative, while inflected forms may be built on a stem with or without the nasal element. Furthermore, there are good reasons to assume that there was no case inflection of personal pronouns in Proto-Uralic. The Turkic proto-language may also postdate the Uralic one by quite some time (Golden (1998, 16)) speaks of a rather long period of 3000–500 B.C.), and the geographical location of the Turkic *urheimat* is still unclear (Golden 1998, 16), and may have been located far to the east of the current area of the Uralic languages (Janhunen 2009, 70), although Janhunen notably places the Uralic *urheimat* to the east of the Urals (Janhunen 2009, 72) and argues that the typological similarities between Uralic and Altaic languages may have resulted from ancient contacts (Janhunen 2009, 62). Be that as it may, relating the pronominal \*-n- in Uralic and Turkic requires a much more detailed picture of the genetic or contact-induced background of the extant similarities between the two language groups (listed for example by Stachowski 2001) than is currently available.

In sum, we have, on the one hand, semantically and phonologically similar suffixes in Eskimo-Aleut, and possibly Yukaghir, in demonstrative but not

personal pronouns. For these languages, detailed proposals for genetic relationships exist (Fortescue 1998, Seefloth 2000) although the comparison drawn by Fortescue (1998, 110) between the Uralic demonstrative *\*nV* and the Eskimo-Aleut pronominal singulative *\*-na* raises a number of questions (is the singulative supposed to have grammaticalized from an earlier demonstrative, or the other way around?). Between the Turkic and Uralic languages, we find a striking similarity between pronoun paradigms, which nevertheless does not allow us to isolate a specific suffixal element with a specific meaning and function. Moreover, we lack any kind of framework (genetic relationship, detailed hypotheses of early contacts, etc.) for interpreting this similarity.

I conclude that the presence of a pronominal *\*-nV* in Eskimo-Aleut and perhaps Yukaghir, as well as the presence of a pronominal nasal element in Turkic, is puzzling; however, it does not, I believe, invalidate attempts to explain the pronominal nasal suffix within Uralic, as I have attempted to do above. To this, compare the *m-/t-* pattern in 1st and 2nd personal pronouns: any ‘internal’ explanation of these pronouns in Uralic, however ingenious, would be highly problematic, as the paradigmatic pattern involved is shared among a number of Eurasian language families and should probably be considered a remnant of a distant common genetic link, even if no such link has been demonstrated. The pronominal nasal suffixes in Eskimo-Aleut and Turkic do not quite amount to that.

## Conclusion

In the preceding, I have presented an admittedly speculative and tentative explanation for the nasal element in Uralic personal and demonstrative pronouns. This explanation is based on a number of crucial assumptions, such as the original absence of a number distinction among personal pronouns, which may be subject to counterargument. My hypothesis that the suffix *\*-nV* in forms such as FP *\*jäsne* ‘limb’ originally signified a constituent of some kind of duality or plurality is likewise not supported by reconstructed elements signifying such a duality or plurality. However, any internal reconstruction applied to variation in a reconstructed proto-language is necessarily tentative and speculative. Among the advantages of the explanation presented here, I would mention that it involves a process (the agglutination of a demonstrative *\*nV*) that is well-attested in the Uralic languages, and that the hypothesis that the pronominal nasal suffix may originally have been involved in clusivity marking would explain why the suffix appears to be sensitive to number without being a clear singulative.

## References

- Alhoniemi, Alho 2010: *Marin kielioppi*. Apuneuvoja suomalais-ugrilaisten kielten opintoja varten 10. Helsinki: Suomalais-Ugrilainen Seura.
- Bartens, Raija 1981: Suomalais-ugrilaisen kantakielen muoto- ja lauserakenteesta. – *Virittäjä* 85: 101–108.
- 1999: *Mordvalaiskielten rakenne ja kehitys*. Mémoires de la Société Finno-Ougrienne 232. Helsinki: Suomalais-Ugrilainen Seura.
- Beekes, Robert S.P. 2011: *Comparative Indo-European Linguistics. An Introduction*. Second Edition. Amsterdam: John Benjamins.
- Bergsland, Knut 1951: Kleinschmidt Centennial IV: Aleut demonstratives and the Aleut-Eskimo relationship. – *International Journal of American Linguistics* 17:3: 167–179
- 1997: *Aleut grammar*. Fairbanks: Alaska Native Language Center.
- Bickel, Balthasar and Nichols, Johanna: Inclusive/exclusive as person vs. number categories worldwide. – Elena Filimonova (ed.): *Clusivity. Typology and case studies of the inclusive-exclusive distinction*. Typological Studies in Language 63. Amsterdam: John Benjamins. 47–70.
- Castrén, M. Alexander 1854: *Grammatik der samojedischen Sprachen*. Herausgegeben von Anton Schiefner. Sankt-Petersburg.
- Corbett, Greville G. 2000: *Number*. Cambridge: Cambridge University Press.
- Csúcs, Sándor 1988: Die Wotjakische Sprache. – Denis Sinor (ed.): *The Uralic languages. Description, history and foreign influences*. Leiden: Brill. 131–146.
- Diessel, Holger 1999: *Demonstratives. Form, function and grammaticalization*. Typological Studies in Language 42. Amsterdam: John Benjamins.
- Donner, Kai 1944: *Kai Donners Kamassisches Wörterbuch nebst Sprachproben und Hauptzügen der Grammatik. Bearbeitet und herausgegeben von A.J. Joki*. Lexica Societatis Fenno-Ugricae VIII. Helsinki: Suomalais-Ugrilainen Seura.
- Elmegård Rasmussen, Jens 1999: The Constituent Elements of the Indo-European Personal Pronouns. – *Selected Papers on Indo-European Linguistics. With a Section on Comparative Eskimo Linguistics*. Copenhagen Studies in Indo-European Vol. 1. Copenhagen: Museum Tusulanum Press. 256–275.
- Erdal, Marcel 2004: *A Grammar of Old Turkic*. Handbook of Oriental Studies, Section Eight Central Asia, Volume Three. Leiden: Brill.
- Filchenko, Andrey Yury 2007: *A Grammar of East Khanty*. Doctoral Thesis, Rice University.
- Fortescue, Michael 1998: *Language relations across Bering Strait. Reappraising the archaeological and linguistic evidence*. London: Cassell.
- Georg, Stefan 2007: *A Descriptive Grammar of Ket (Yenisei-Ostyak). Part 1: Introduction, Phonology and Morphology*. Folkestone: Global Oriental.
- Golden, Peter B. 1998: The Turkic Peoples. A Historical Sketch. – Lars Johanson and Éva Ágnes Csató (eds.): *The Turkic Languages*. London: Routledge. 16–29.
- Hahmo, Sirkka-Liisa 1994: *Grundlexem oder Ableitung? Die finnischen Nomina der Typen kämmen und pähkinä und ihre Geschichte*. Studia Fennica, Linguistica 5. Helsinki: Suomalaisen Kirjallisuuden Seura.
- Hakulinen, Lauri 1979: *Suomen kielen rakenne ja kehitys*. Neljäs, lisätty ja ajanmukaisesti painos. Helsinki: Otava.
- Helimski, Eugene 1998: Selkup. – Daniel Abondolo (ed.): *The Uralic Languages*. London: Routledge. 548–579.

- Honti, László 1993: Zur Morphologie ugrischer Personalpronomina. – Ulla-Maija Kulonen (ed.), *Festschrift für Raija Bartens zum 25.10.1993*. Mémoires de la Société Finno-Ougrienne 215. Helsinki: Suomalais-Ugrilainen Seura. 121–127.
- 1995: Zur Morphotaktik und Morphosyntax der Uralischen/Finnisch-Ugrischen Grundsprache. – *Congressus Octavus Internationalis Fenno-Ugristarum pars I*. Jyväskylä. 53–81.
- 1997: Numerusprobleme. (Ein Erkundungszug durch den Dschungel der uralischen Numeri). – *Finnisch-Ugrische Forschungen* 54: 1–126.
- 2006: Erästä ugrilaisten kielten postpositioperäisestä kaasussuffiksien perheestä. – *Journal de la Société Finno-Ougrienne* 91: 81–91.
- 2012: Das Zeitalter und die Entstehung der Personalpronomina mit velaren Vokalen. – *Per Urales ad Orientem. Iter polyphonicum multilingue. Festschrift tillägnad Juha Janhunen på hans sextioårsdag den 12 februari 2012*. Mémoires de la Société Finno-Ougrienne 264. Helsinki: Suomalais-Ugrilainen Seura. 121–129.
- Itkonen, Erkki 1955: Onko itämerensuomessa jälkiä dualista? – *Virittäjä* 59: 161–175.
- Janhunen, Juha 1977: *Samojedischer Wortschatz: gemeinsamojedische Etymologien*. Castrenianumin Toimitteita 17. Helsinki: Helsingin yliopisto.
- 1982: On the structure of Proto-Uralic. – *Finnisch-Ugrische Forschungen* 44: 23–42.
- 2009: Proto-Uralic: What, where, when? – Jussi Ylikoski (ed.): *The Quasquicentennial of the Finno-Ugrian Society*. Mémoires de la Société Finno-Ougrienne 258. Helsinki: Suomalais-Ugrilainen Seura. 57–78.
- 2013: Personal pronouns in Core Altaic. – Martine Robbeets and Hubert Cuyckens (eds.): *Shared Grammaticalization. With special focus on the Trans-urasian languages*. Studies in Language Companion Series 132. Amsterdam: John Benjamins. 211–226.
- Kálmán, Béla 1988: The history of Ob-Ugric languages. – Denis Sinor (ed.), *The Uralic languages. Description, history and foreign influences*. Leiden: Brill. 395–412.
- Katzschmann, Michael 2008: *Chrestomathia Nganasanica. Texte – Übersetzung – Glossar – Grammatik*. Norderstedt: Books on Demand.
- Kettunen, Lauri 1956: *Die Herkunft des Terminativs, Genitivs, Instruktivs und Komitativs*. Suomalaisen Tiedeakatemia Toimituksia B:98–2. Helsinki: Suomalainen Tiedeakatemia.
- 1960: *Suomen lähisukukielten luonteenomaiset piirteet*. Mémoires de la Société Finno-Ougrienne 119. Helsinki: Suomalais-Ugrilainen Seura.
- Korhonen, Mikko 1980: Über die struktural-typologischen Strömungen (Drifts) i den uralischen Sprachen. – *Congressus Quintus Internationalis Fenno-Ugristarum Pars I*. Turku: Suomen Kielen Seura. 87–110.
- 1981: *Johdatus lapin kielen historiaan*. Suomalaisen Kirjallisuuden Seuran Toimituksia 370. Helsinki: Suomalaisen Kirjallisuuden Seura.
- Kulonen, Ulla-Maija 2001: Über die Deklination der Personalpronomina in der finnisch-ugrischen Grundsprache. – *Congressus Nonus Internationalis Fenno-Ugristarum Pars V*. Tartu. 178–182.
- Laanest, Arvo 1982: *Einführung in die ostseefinnischen Sprachen*. Hamburg: Buske.
- Lehtisalo, Toivo 1936: *Über die primären uralischen Ableitungssuffixe*. Mémoires de la Société Finno-Ougrienne 72. Helsinki: Suomalais-Ugrilainen Seura.



- Maslova, Elena 2003a: *Tundra Yukaghir*. Languages of the world. Materials 372. München: Lincom Europa.
- 2003b: *A Grammar of Kolyma Yukaghir*. Mouton Grammar Library 27. Berlin: Mouton de Gruyter.
- Mathieu, Éric 2012: Flavors of Division. – *Linguistic Inquiry* 43:4: 650–679.
- Nikolaeva, Irina 2006: *A Historical Dictionary of Yukaghir*. Trends in Linguistics: Documentation 25. Berlin: Mouton de Gruyter.
- Ravila, Paavo 1941: Über die Verwendung der Numeruszeichen in den uralischen Sprachen. – *Finnisch-Ugrische Forschungen* 27: 1–136.
- Rédei, Károly 1973: Über die Demonstrativpronomina in den uralischen Sprachen – *Commentationes Fenno-Ugricae in honorem Erkki Itkonen sextigenarii die XXVI mensis aprilis anno MCMLXXIII*. Mémoires de la Société Finno-Ougrienne 150. Helsinki: Suomalais-Ugrilainen Seura. 311–319.
- 1988a: Die syrjänische Sprache. – Denis Sinor (ed.), *The Uralic languages. Description, history and foreign influences*. Leiden: Brill. 111–130.
- 1988b: Geschichte der permischen Sprachen. – Denis Sinor (ed.), *The Uralic languages. Description, history and foreign influences*. Leiden: Brill. 351–394.
- 1998: Zur Geschichte der finnougriischen Personalpronomina. – *Linguistica Uralica*: 341–352.
- Sammallahti, Pekka 1998: *The Saami languages: An introduction*. Kárášjohka: Davvi girji.
- Seefloth, Uwe 2000: Die Entstehung polypersonaler Paradigmen im Uralo-Siberischen. – *Zentralasiatische Studien* 30: 163–191.
- Shields, Kenneth 1986: Some Remarks about the Personal Pronouns of Indo-European. – *Zeitschrift für vergleichende Sprachforschung* 99: 10–22.
- 1998: Comments on the evolution of the Indo-European personal pronoun system. – *Historische Sprachforschung* 111–1: 46–54.
- Siegl, Florian 2008: A note on personal pronouns in Enets and Northern Samoyedic. – *Linguistica Uralica* XLIV-2: 119–130.
- Stachowski, M. 2001: Uralistik und Turkologie – geschieden und doch verliebt. – János Pusztay (ed.): *Vade mecum! A huszonötödik óra a Berzsényi Dániel főiskola Uralisztikai Tanszékének (1991–2001) jubileumi konferenciája (2001. április 26–27)*. Az uralisztikai tanszék kiadványai 9. Szombathely: Berzsényi Dániel főiskola. 209–225.
- Stolz, Thomas, Stroh, Cornelia and Urdze, Aina: *On comitatives and related categories: a typological study with special focus on the languages of Europe*. Empirical Approaches to Language Typology 33. Berlin: Mouton de Gruyter.
- Tauli, Valter 1966: *Structural tendencies in Uralic languages*. Uralic and Altaic series 17. The Hague: Mouton.
- UEW = Rédei, Károly (ed.) 1988: *Uralisches etymologisches Wörterbuch*. Wiesbaden: Otto Harrassowitz.
- Vértes, Edith 1967: *Die ostjakischen Pronomina*. Bloomington: Indiana University.
- Vitso, Tiit-Rein 2012: Early metallurgy in language: The history of metal names in Finnic. – *A linguistic map of prehistoric Northern Europe*. Mémoires de la Société Finno-Ougrienne 266. Helsinki: Suomalais-Ugrilainen Seura. 185–200.
- Vovin, Alexander: First and second person singular pronouns: a pillar or a pillory of the ‘Altaic’ hypothesis? – *Türk Dilleri Araştırmaları* 21.2: 251–278.
- Wagner-Nagy, Beáta 2002: *Chrestomathia Nganasanica*. Szeged, Budapest: SZTE Finnugor Tanszék, MTA Nyelvtudományi Intézet.