

THE MORDVINIC LANGUAGES BETWEEN BUSH AND TREE: A HISTORICAL REAPPRAISAL

The mutual relationship between the Uralic languages was the subject of debate in Uralic linguistics during 1980s and 1990s. One of the principal claims was that rather than considering the history of the Uralic languages as a chronologically descending binary tree model, the development of these languages has in fact been much more complicated. Consequently, the taxonomy of Uralic languages should be based on attested innovations between various subgroups of the language family without presupposing several intermediate stages between the earliest protolanguages and individual branches.

While the traditional binary tree model suggests that the present-day geographical dispersion of the Uralic languages actually reflects a gradual historical division of protolanguages, the opposite point of view emphasises that the geographical distribution of the language family is incompatible with the historical processes and that the number of protolanguage stages is much smaller than has been previously assumed.

The purpose of this article is to examine the position of the Mordvinic languages (Erzya and Moksha) with special emphasis on their relationship to the Finnic languages in the light of the taxonomy of the Uralic languages and historical linguistics. In principle, considerably more attention could and should be paid to the Saamic languages than is done below. The main hypothesis is that there is certain discrepancy between the historical relationship of Mordvinic with respect to other Uralic languages and those taxonomic models in which all Uralic languages have a similar relationship to a common protolanguage (!) (Proto-Uralic) and with respect to one another. Although the concept of Proto-Uralic is merely based on the reconstruction of Uralic languages, it also symbolises the historical starting point for the dispersal and expansion of the language family, which was followed by the diffusion of later innovations. Given that language change is not uniform, explanations concerning the historical relationship between the Uralic languages must also take into account the dissimilarity of language change in linguistic data.

1. The position of Mordvinic languages in the taxonomy of FU (Uralic) languages

The conclusions that were drawn regarding the place of the Mordvinic languages in the Uralic language family are almost exclusively based on lexical evidence and etymological analyses of vocabulary based on historical phonology. Phonological changes and innovations have been traditionally elaborated on in detail whereas less attention has been paid to grammatical changes. In the earliest binary tree models (Budenz 1879: 38; Donner 1879: 156; Korhonen 1981: 27; Setälä 1926: 54; Szij 1990: 21–58) Mordvinic was described as an intermediate language between the Finnic languages and the more eastern Uralic languages, whereas the position of Saamic was gradually attached to that of Finnic. Furthermore, Mordvinic was repeatedly attached to Mari, although there was not much evidence of a common historical Volgaic protolanguage having preceded them. However, recently Zaicz (2005) has assumed, on the basis of very limited data, that some lexical parallels could possibly support the hypothesis of a Volgaic protolanguage. Furthermore, it was repeatedly asserted that there was historically an intermediate Finno-Volgaic protolanguage, and the evidence was drawn especially from Finnic and Mordvinic.

The assumption of a Finno-Volgaic protolanguage was most concretely testified in Erkki Itkonen's (1946) study of the historical development of the vowel system of the western Uralic languages with special reference to Finnic and Mordvinic. Itkonen did not propagate the concept of a Finno-Volgaic protolanguage in the mentioned article, but did refer to it on a later occasion when connecting Saamic, Finnic, Mordvinic and Mari (Erkki Itkonen 1960: 19–20; 1961: 37–38). The given concept is applied more consistently in later studies on the history of Mordvinic (Bartens 1999; Keresztes 1981) and the Saamic languages (Sammallahti 1984: 139, 151). The concept Pre-Mordvinic is used parallel with the previous one and denotes a historical stage preceding Proto-Mordvinic, but which no longer represented a shared Finno-Volgaic protolanguage (Erkki Itkonen 1971–1972; Keresztes 1981: 36–40).

Regardless of whether the historical relationship between the Uralic languages may be described as a binary tree model or an alternative model, Mordvinic is posited between the northwestern Uralic languages (Saamic, Finnic) and the more eastern ones (Mari, Permic, Ugric, Samoyedic). This, of course, may simply reflect the geographical location of the languages. However, the assumption of a Finno-Volgaic language unity, or to put it in another way, a shared protolanguage of the Saamic, Finnic and Mordvinic languages was based on empirical evidence, although this has not been explicitly demonstrated. Those researchers who have directly or indirectly assumed an earlier Finno-Volgaic

protolanguage considered the historical development of especially Mordvinic as evidence for resolving more detailed questions.

Typologists and specialists of areal linguistics have recently argued against binary tree models (Aikhenvald & Dixon 2001b: 6; Dahl 2001: 1456–1457; Dixon 1997: 28). There would appear to be language areas, such as the Pama-Nyungan languages in Australia, into which the family tree model simply does not fit, but this does not invalidate the genetic relationship between the languages (Bowern 2006). However, criticism of the family tree model has met with some counterarguments as well (Campbell 2006: 18–21). Furthermore, the binary tree model has been criticised or rejected as a descriptive model in recent studies of the history Uralic languages (Häkkinen 1984a, 1984b; Salminen 1999), and this, in turn, has raised comments emphasising its compatibility with real changes and ontological plausibility (Esa Itkonen 1998).

The criticism against the binary tree model for the Uralic languages has mainly been focused on too dogmatic conclusions concerning language change and the mutual relationship between the Uralic languages on the basis of this model. The alternative models emphasise the lack of shared phonological innovations in previously assumed intermediate protolanguage stages between Proto-Uralic and the protolanguages of the main branches of Uralic such as Proto-Mordvinic and Proto-Finnic. However, since a language normally has a single parent, the constructing of a family tree based on the evidence of shared features and a common ancestor is therefore possible, in principle (Dixon 1997: 11–13; Haspelmath 2004: 214–216). Campbell (2006: 20–21) concludes that in this case the family tree is always relevant and the question of explaining the historical development of language is not a choice between diffusion and convergence or family tree. Nor is it a choice between areal and genetic relationship of languages. Consequently, all approaches have to be taken seriously into account. As April and Robert McMahon put it, comparative historical studies are still a crucial part of linguistics and other programmes are not intended to be a substitute for linguistic expertise (McMahon & McMahon 2006: 72; cf. also Laakso 1999 on the role of language contacts and morphosyntax in language history).

It is evident that there are several viewpoints that have to be considered in the historical analysis of the Uralic languages. There is still a lot to be done in the etymological research of, especially, Uralic languages other than Finnish, Estonian and Hungarian. In addition to lexical evidence, grammatical data is of greater relevance than the role it has been given up to the present. Furthermore, there are better tools to deal with onomastic data than earlier (Aikio 2004; Mullanen 2002; Saarikivi 2004, 2006; Saarikivi & Grünthal 2005: 130–133).

Dixon (1997) claims, on the basis of Australian languages, that there are equilibrium periods in the history of language, during which languages do not

constantly split into new ones but coexist and influence one another. Only “punctuations” that reflect an abrupt change in historical events and a sudden flow of innovations are relevant for family tree model. Haspelmath (2004) notes that the concepts of equilibrium and punctuation are too general and vague to be relevant in a more detailed analysis of the historical development of a particular language. (For criticism, see also Bower 2006.) The point is that language change is a more or less constant phenomenon that takes place in numerous ways. Therefore, the diffusion of all innovations cannot be attached to a single period, although some periods of innovations certainly are more intensive than others. Yet, the concept of equilibrium may be useful for demonstrating the time span and relative chronology of innovations.

One of the starting points in explaining the affinity and diversity between the Uralic languages is that, basically, the splitting and areal dispersal of a protolanguage decreases similarity and increases diversity. Ross (2001: 139) notes that languages do not usually converge and become more alike, but take on distinctive features. This principle is basically valid in individual cases, such as the historical development of the Mordvinic and Finnic languages as well, if the descendants of a common protolanguage are all assumed to take their own path simultaneously. However, evidence from the Finnic languages suggests that a secondary integration between dialects and even between closely related languages is fairly common, if there have been contacts between the language areas at issue and especially, if they are geographically adjacent. There is also ample evidence to show that integration may take place under the influence of a socially dominating standard language, such as Standard Finnish and Standard Estonian or local varieties, or of a social prestige language such as Russian in those territories in which Karelian, Lude and Veps are or used to be spoken.

Dynamics of this kind in language change decrease the distinctiveness between individual languages and integrate them as a result of secondary development. There obviously are periods of “punctuation”, but it seems clear that a period of “equilibrium” need not necessarily involve a stable coexistence of languages that descend from a common protolanguage. “Equilibrium” and the period following the dispersal of a protolanguage is subject to secondary integration, convergence and diachronic changes that need neither be compatible with those that demonstrate an indisputable punctuation nor as abrupt as those that appear to distinguish the protolanguage from its successors.

2. Evidence from linguistic data and identification of historical language change

The outlining of binary tree model of the Uralic languages took place parallel with intensive research into vocabulary based on historical phonological analyses that April and Robert McMahon call regularity hypotheses (McMahon & McMahon 2006: 51). As already mentioned, late criticism against binary tree model has been mainly based on the fact that there are no historical sound change innovations that make it possible to distinguish unambiguously between those intermediate protolanguages that the traditional Uralic binary tree model would imply. The phonological development of the Uralic languages is elaborated on in detail in Sammallahti (1988). That analysis demonstrates that there are no very big changes between Proto-Uralic and those assumed protolanguages that connect the main branches of the present-day Uralic languages. Some recent studies of the history of individual branches suggest that Proto-Uralic is actually the next well-argued stage with which the protolanguage stage of a given branch has to be compared (Salminen 2002; cf. Sammallahti 1988). Thus, there is insufficient historical phonological evidence from intermediate stages such as Proto-Finno-Volgaic and Proto-Finno-Permic, which are assumed in the binary tree model. However, Honti stresses that the rejection of a Ugric protolanguage, for instance, is not acceptable, and a more careful analysis of empirical data supports the assumption of an intermediate Ugric protolanguage (Honti 1998)

The weakness of the conclusion that connects individual Uralic branches (Saamic, Finnic, Mordvinic, Mari, Permic, Ugric, Samoyedic) directly to Proto-Uralic is that only little attention is paid to grammatical changes, most notably the evolution of inflectional morphology and syntax, and even evidence and the distribution of Indo-European loanwords is not considered important. There is considerable disparity between assumed Proto-Uralic grammatical categories (Janhunen 1982: 30; Korhonen 1991: 166–174; Hajdú 1972, 1973: 62; Rédei 1996a, 1996b) and those of individual Uralic branches. It is clear that the evidence from lexical and historical phonological data is not identical, although the phonological reconstruction is based on lexical data. It is also clear that lexical evidence differs from grammatical and may reflect a different period in language history.

Consequently, grammatical and sound changes need not depend on one another. The reconstructed protolanguage stages demonstrate the beginning and the end of a phonological process. Grammatical change takes place independently of sound change as the reanalysis of grammatical units does not imply a fundamental change in form (Campbell & Harris 1995: 30, 61; Grünthal 2003b: 38; Haspelmath 1998), although phonological erosion may accelerate these and

cause changes in suffixal inflection. We may therefore draw the preliminary conclusion that if sound changes and grammatical changes are not compatible in time, they may demonstrate a different time span in the historical development of a given language or language group.

At the beginning of the 20th century the number of assumed Proto-Uralic etymologies was much higher than in recent more critical works that have reduced the number to considerably less than 200 (Janhunen 1981; Sammallahti 1979). Of late, new plausible comparisons have been made between individual Uralic branches (Aikio 2002, 2006; Saarikivi 2006: 34–37). Given that many of the largest vocabularies of the Uralic languages spoken in Russia, such as Erzya, Moksha, Mari, Komi, Udmurt, Nenets, were published after the major comparative etymological works on the Uralic languages Finnish and Hungarian were compiled, the possibility of discovering new etymologies are today much better than they were earlier. Undoubtedly, new etymologies between various Uralic languages will be revealed, and recently published vocabularies and studies on historical sound change details will provide a better foundation for this kind of work.

Indo-European loanwords in Uralic languages demonstrate that certain words are known in most or even all Uralic languages, and numerous Indo-European loanwords were borrowed from identifiable descendants of Indo-European protolanguage to an early Uralic variety (Koivulehto 1999a, 1999b, 2001). Moreover, words that are known from individual Uralic branches only, such as Saamic (Sammallahti 1999, 2001), Finnic (cf. Koivulehto for more details) and Mordvinic (Grünthal 2001, 2002) originate from various early Indo-European protolanguages.

This leads to a paradox in the interpretation of lexical evidence and historical sound changes. While two distinctive protolanguage layers must be used in the analysis of the history of the Uralic languages, i.e. Proto-Uralic and the protolanguage of individual branches, the Indo-European languages and the existence of Indo-European loanwords in Uralic languages suggest that loanwords were adopted into Uralic in different places and eras. Kallio (2006) recently scrutinised this conclusion and sought to elaborate on an alternative hypothesis, according to which Indo-European loanwords could not have been adopted into a Uralic protolanguage that had remained unchanged for a long period. Nevertheless, it is evident that the early Indo-European languages that were in contact with Uralic represent more than two protolanguage levels. This conclusion is based on both loanwords and archaeological data, a well-argued consensus based on an assumption of prehistoric continuity in archaeological and linguistic data (Carpelan 2000; Carpelan & Parpola 2001; Koivulehto 2006; Lehtinen 2005: 171–172). In principle, the layering of early Indo-European languages im-

plies that there was probably a difference both chronologically and in substance between the early Uralic languages as well, although this view is not at the moment very popular.

Kallio (1998, 2006) has emphasised that archaeological dating and relative chronology should be cautiously applied in reconstructing the history of Uralic languages in the Baltic Sea region. He does not consider the evidence of various Indo-European loanwords in the Uralic languages a problem and assumes that the wide distribution of Proto-Indo-Iranian loanwords in Uralic languages proves that various Uralic branches had not linguistically diverged from one another at the time the loans were adopted. Furthermore, he claims that the evidence from northwestern Germanic loanwords is insufficient for distinguishing between Finnic and Saamic. Conceivably, Kallio suggests that the datings that have been applied during the past fifty years in the analysis of historical Uralistics should be reconciled and changed into more recent datings. He (Kallio 2006: 9) argues that it is not plausible to suppose that the time span between Proto-Uralic and Proto-Finno-Saamic (respectively, Proto-Finno-Volgaic) was several millennia, if these two language forms were almost identical.

One of the fundamental questions in the absolute chronology of individual historical sound changes and substitutions of phonotactically impossible combinations concerns their time span. Historical sound changes typically take place for a relatively short period. The most notable changes that distinguish Estonian from Finnish, for instance, took place for a relatively short period during the Middle Ages (Rätsep 2002 (1989): 14–26). Phonotactical rules such as the lack and replacement of word-initial consonant clusters of Indo-European loanwords in Uralic languages, however, may be characteristic of a particular language type for a long period, even though the language would considerably change during the same time.

There are two important ways of enhancing empirical evidence in the discussion of the genetic relationship between the Uralic languages and the development of individual branches. Firstly, there is a great need for up-dating the etymological research of the geographical core area of the Uralic languages, namely Mordvinic, Mari, Permic and Ob-Ugric. During the past decades, special emphasis has been laid on languages in the geographical periphery, such as Saamic, Finnic, Hungarian and Samoyedic, supposing that the linguistic periphery is often more conservative than the core area. Secondly, the evidence of grammatical change should be taken more seriously and not only as part of a historically oriented sound change analysis, but as an independent module that provides additional and important information for piecing together the picture of the historical development of the Uralic languages.

3. Implications of relative chronology in language history

The relative chronology of sound history, morphosyntactic changes and endogenous Uralic vocabulary is based on the geographical distribution of detailed phonological and grammatical features in the Uralic languages. The relative chronology of contact-induced changes is based on the distribution of given units (most commonly loanwords) in both the Uralic languages and the neighbouring Indo-European or other languages. The evidence of lexical data is based on the distribution and phonological shape of the given word(s) in both of the language families involved in the borrowing. The differences in lexicostatistical evidence between various Uralic groups can be interpreted in two ways. First, statistical difference of shared etymologies may be irrelevant, having resulted from an incoherent diffusion of innovations. It is also well-known that numerous Uralic etymologies that presumably result from an early protolanguage stage do not have cognates in many individual languages. Second, opposed to the previous point, the evidence from vocabulary, most notably words indicating the gradual growth of the importance of agriculture and animal husbandry may be relevant in reconstructing prehistoric relations, cultural and areal distinctions between various Uralic groups, although Häkkinen, for instance, does not draw such conclusions (Häkkinen 1998, 1999, 2001; Häkkinen & Lempiäinen 1996). In older studies on the etymological strata of the vocabulary of the Finnic languages it was more consistently assumed that differences in vocabulary reflect cultural and areal differences, as well (Erkki Itkonen 1960, 1961: 37–47; Hakulinen 1979: 309–382; Rätsep 2002: 47–77).

As a consequence of reconstructing a shared protolanguage, diversity between individual groups and assumed prehistoric FU-speaking language areas decreases. Conceivably, a late expansion could be a possible explanation for the lack of diversity between the Uralic protolanguage and later layers. This is most clearly explained in Salminen (2002) and Kallio (2006). Kallio claims that it is unlikely that the diversity between Uralic languages was stable for several millennia. According to Kallio, the Uralic protolanguage could be much younger than has been recently assumed.

However, the diversity between prehistoric language contacts suggests that early Uralic-speaking groups were in contact with speakers of northwestern (Germanic), northeastern (Baltic) and southeastern Indo-European languages (Indo-Iranian). It is also unlikely that protolanguages split abruptly into large language families and individual branches. Consequently, there is certain disparity between the small number of plausibly distinguishable protolanguages in the Uralic language family and the greater difference between the Indo-European languages from which loans were borrowed into Uralic languages and vari-

ous branches of the language family. Therefore, it is necessary to proceed with a discussion concerning whether further evidence could be found from a closer analysis of the relationship between individual FU branches. Alternatively, those features that presumably were the basis of assumed Finno-Volgaic or Finno-Permic protolanguages must be explained as convergent, and the conclusion drawn, as has indeed been done by many linguists recently, that lexical evidence alone is insufficient for proving the existence of intermediate protolanguages.

The next section sets out from the hypothesis that further evidence can be found and that evidence of morphological and syntactic changes should be taken more carefully into account in conclusions made concerning the rise and fall of protolanguages.

4. Grammatical innovations shared by Mordvinic and Finnic

The empirical evidence that will be discussed in this section suggests that there are shared morphological and syntactic innovations in the Finnic and Mordvinic languages that suggest a historically closer relationship between these language groups than between geographically more remote languages such as Permic, Ugric and Samoyedic.

The following data are mainly drawn from Mordvinic and Finnic, although many features would actually demand a detailed investigation of the Saamic languages, as well. The point is that the listed characteristics distinguish the north-western Uralic languages (Finnic, Mordvinic and possibly Saamic) from geographically more remote languages (Permic, Ugric, Samoyedic, and possibly Mari). This list is tentative and does not seek to be exhaustive. As will be shown, most of the examples are major grammatical changes that are potentially relevant for the interpretation of the historical relationship between various Uralic-speaking groups. Given that the Uralic languages are spoken over a large geographical area extending from the coast of the Atlantic Ocean to Siberia, isoglosses that can be outlined within the language family may indicate mutually more closely connected groups. These are less likely to result from areal contacts, because of the large geographical area at issue. Furthermore, inflectional units that express grammatical core relations do not easily spread from one language to another even if they are closely related.

The most salient shared similarities between the noun morphology of the Finnic and Mordvinic languages are found in the case paradigm. There are similarities between the paradigms as a whole and between the form and function of individual cases and case sets. Many Uralic languages have rich case systems and

suffixal morphology, a characteristic of the whole language family. The number of cases in the various Uralic languages essentially depends on how many local cases or sets of local cases they display. Therefore, special attention must be paid to the more detailed characteristics of grammatical and adverbial cases.

The similarity between the Finnic and Mordvinic case paradigms is not based on the similarity of cases as functional units, but on the affinity in both form and function. In both language groups there are three grammatical cases that may occur as the case of object. In most Uralic languages there are only two cases of object, the accusative and nominative. As regards the adverbial cases, a tripartite set of local cases constitutes the core. The following list summarises the parallels between the Finnic and Mordvinic case systems and is commented on in more detail below.

- 1) The case paradigm consists of 3–4 grammatical cases and 7–11 adverbial cases. The similarity of the majority of the cases originates from historical affinity.
- 2) The case of object is less uniform than in other Uralic languages. The degree of transitivity of the verb (resp. the clause) is more decisive for the selection of the case of object than whether the verb (resp. the clause) is transitive or not.
- 3) The development of the grammatical cases is influenced by the merger of the historical genitive **-n* and accusative **-m*.
- 4) The historical Uralic ablative case **-tA* has become an object marking case.
- 5) There is a similar tripartite set of local cases that consists of lative (LOC+), locative (LOC=) and ablative (LOC–) cases. Historically these cases are dyadic and display a common morpheme (*-s-*) that indicates the type of space, and another morpheme denoting the morphosyntactic property of the given local case (LOC+/ LOC=/ LOC–).
- 6) There is a separate translative case (cf. Finnish *-ksi*, Erzya *-ks*) that is distinguishable from the lative cases and marks the predicative adverbial.

The similarity between the individual categories and suffixes is added to by functional parallelism. However, here one must alertly make a distinction between inherent features and typologically frequent universal phenomena. A more general question is whether the listed features should be accounted for as being convergent. The following comments seek to explain why the listed similarities are possible indications of shared genetic innovations and not merely convergent. Some examples of convergence and typologically similar but historically less probative parallels are presented in section 6.

1) Comparing the case paradigms of the Uralic languages, many languages still display some cases of the assumed Proto-Uralic case system consisting of three grammatical and (at least) three adverbial cases (Janhunen 1982: 30; Korhonen 1991: 166–174; Hajdú 1972, 1973: 62; Rédei 1996a, 1996b). However, most Uralic languages display some innovations that are based on the introduction of new cases or entire case sets after the oldest assumed protolanguage level. The difference between the grammatical cases of the Uralic languages is smaller than between adverbial case systems, although this may also be due to the more limited number of grammatical cases.

Besides the unmarked nominative case, the genitive and accusative are cases of nominal core arguments that are higher in the hierarchy of nominal constituents and less marked than adverbial cases. The change of grammatical case mainly takes place through reduction, semantic change and reanalysis of adverbial cases. The biggest differences between the case systems of individual branches of the Uralic language family are seen in the adverbial cases. This is because suffixation of new cases is a very frequent form of change in the world's languages and languages with a rich suffixal system, such as Uralic, form new suffixes from earlier free morphemes (postpositions) and by recombining morphemes.

Although double cases are not very frequent in the Uralic languages, nor in the languages of the world as a whole, adverbial cases are often dyadic and originate from two distinct morphemes. The similarity between the Finnic and Mordvinic case paradigm includes the similarity between the nominative, genitive(-accusative) as well as the partitive (Finnic) and ablative (Mordvinic) that is compatible with the Finnic partitive in many respects (Denison 1958; Erkki Itkonen 1971–1972, 1973). Furthermore, a tripartite set of local cases with the index *-s-* is the primary means of expressing spatial relations. The similarities between the grammatical cases in the Finnic and Mordvinic languages will be discussed in 3) and 4), whereas the adverbial cases will be considered in more detail in 5) and 6).

2) The case of object and the distinction between the nominal arguments of a transitive clause is less uniform in Finnic and Mordvinic than in the other Uralic languages. This is a result of those changes that were described above. While other Uralic languages (including Saamic) display one principal case of object and use the nominative in some clause types, Finnic and Mordvinic use three cases to mark the object, namely the genitive-accusative, partitive (ablative) and nominative. The degree of transitivity of the verb (or the clause) is more decisive for the selection of the case of object than whether the verb (or the clause) is transitive or not (Alhoniemi 1991).

Given that Mordvinic displays object conjugation and distinguishes between the indefinite and definite declination of nouns, the case of object is prone

to the influence of more morphosyntactic factors than is Finnic. Nevertheless, complexity has increased considerably during the evolution of Mordvinic languages as an individual branch. According to Keresztes (1999), the object conjugation paradigm, for instance, probably never distinguished between the forms of every individual category, rather the paradigm became complex through gradual extension. So, the synchronic overlapping of certain parts of object conjugation paradigms reflects the historical state-of-the-art as well.

The existence of a distinctive object conjugation probably did not cause very dramatic changes in the case of object, because diverse object forms are still used in Mordvinic transitive clauses. It appears that the distinction between three object marking cases, the nominative, genitive-accusative and partitive, is grammatically very relevant. However, it must be noted that if Saamic once displayed a similar system, as suggested by historically different object cases in the singular and plural (Korhonen 1981: 212–216; Sammallahti 1998: 65–70), it has changed to become a simplified system.

3) The Proto-Uralic genitive **-n* and accusative suffix **-m* have merged in Finnic, Mordvinic and in northern and eastern Saamic variants. Other Uralic languages either display a similar opposition between the nominative, genitive and accusative as Proto-Uralic (Western Saamic variants, Mari, Samoyedic), have re-established the distinction by a secondary semantic change of other suffixes (Permic), or have completely lost a suffixal genitive (Ugric).

The historical merger between the genitive and accusative in Finnic, Mordvinic and Saamic was not compensated for with additional changes in their case systems. This led to an accumulation of functions, and the same suffix (in Saamic a flexive form) is used to denote possessive relations and mark the object. Furthermore, Finnic and Mordvin share some of the basic distinctions between clauses of low and high transitivity (Denison 1958; Erkki Itkonen 1971–1972, 1973; Larjavaara 1991: 378–381).

As a result of the merger between the genitive and accusative, the transitive clause has probably been in a more or less constant state of transition in Finnic, Mordvinic and Saamic. Synchronically, there is an important parallel between the Finnic and Mordvinic transitive clause; in both languages a morphological distinction is made between clauses of high and low transitivity (cf. point (4)), whereas the genitive-accusative and partitive became suppletive forms of the case of object in Saamic, the first being used in the singular and the latter in the dual and plural.

Later, additional changes took place in the transitive clause of various Finnic languages (Erelt & Metslang 1997; Metslang 2001). Livonian and Estonian, for instance, display verb particles to mark high transitivity (perfective aspect), have lost the genitive-accusative suffix **-n* and display the partitive in

certain contexts, such as in connection with sense perception verbs, for which the northern Finnic languages prefer the genitive-accusative. Veps in turn, displays the genitive-accusative as the case of object more commonly than the other Finnic languages (Kettunen 1943: 115–118).

The merger between the genitive **-n* and accusative **-m* in Finnic and Mordvinic is a major change that influenced the entire system of grammatical cases. The similarities between the use of the cases of object and the transitive clause deserve further investigation. As the differences between the transitive clauses of individual Finnic languages suggest, it is not very likely that similar basic rules in transitive clause use would be merely convergent and emerge in two different Uralic branches completely independently of one another.

4) The descendant of the Uralic ablative case suffix **-tA* is used as a case of object in Finnic and Mordvinic only. (Note that historically Saamic displays a cognate of the Uralic **-tA* in plural object forms (Korhonen 1981: 214–216; Sammallahti 1998: 70), but unlike Finnic and Mordvinic the formation of the genitive-accusative object is suppletive and displays both historical genitive-accusative and partitive forms.) Although the Erzya *-de*, *-do* and Moksha *-da* are misleadingly labelled as ablative (or separative), it is primarily the case of object in Erzya (Bartens 1999: 93–94; Cygankin et al. 2000: 84) and frequently the case of object in Moksha, as well (MK 2000: 65–66). Furthermore, it is used as the case of partial predicative and subject, the latter more frequently in Moksha than Erzya (Alhoniemi 1982: 55; Bartens 1999: 94). This adds to the similarities between the Finnic partitive and Mordvinic ablative even more.

5) The Finnic and Mordvinic languages display a similar tripartite set of local cases that consists of a lative (LOC+), a locative (LOC=) and an ablative (LOC–) case that share the core morpheme (*-s-*) of the subsystem. Bartens (1993) labels this element of bi-morphemic local cases a coaffix. In an earlier article I suggested that bi-morphemic local cases of this kind consist of a morpheme indicating the type of spatial relation, such as internal (LOCI+/ LOCI=/ LOCI–) or external (LOCE+/ LOCE=/ LOCE–) local cases, and another morpheme indicating the morphosyntactic property of the case (Grünthal 2003a).

It has been held that the rise of such sub-paradigms as Finnish *koti* ‘home’ : *koti-in* [home-ILL] (dial. *kotihin* << **koti-sen*) : *kodi-ssa* [home-INESS] : *kodi-sta* [home-ELAT] and Erzya *kudo* ‘house’ : *kudo-s* [house-ILL] : *kudo-so* [house-INESS] : *kudo-sto* [house-ELAT] demonstrate an innovation shared between Finnic and Mordvinic (Bartens 1999: 78–79). Yet, it should be noted that the similarity between the local cases that share the marker of the special type *-s-* extends to Mari, although the inflectional pattern and the historical evolution is not as clear as it is in Finnic and Mordvinic (Alhoniemi 2001).

Concerning shared innovations between Finnic and Mordvinic, the point is that the similarity between the *s*-cases in these languages is not due solely to the form of the morpheme *-s-* that marks spatial relations. In both language groups the *-s*-set distinguishes between the locative and ablative form by means of an identical dyadic suffix. The inessive historically descends from **-s-* + **-nA*, the elative from **-s-* + **-tA* (Bartens 1999: 78–79; Serebrennikov 1967: 35–40). The most important difference between these local case systems is that the Mordvinic illative consists of a single morpheme, whereas the Finnic illative is bi-morphemic as are the other two cases.

6) The similarity between the Finnic (cf. Finnish *-ksi* etc.) and Mordvinic (*-ks*) translative is an innovation that is limited to these two groups only. The translative is the case of the predicative adverbial that historically most likely originates in two lative suffixes **-k* and **-s* (Bartens 1999: 77–78). More generally speaking, other Uralic languages frequently use a lative case to indicate a predicative adverbial, but they are not historically identical to the Finnic and Mordvinic translative (Riese 1992–1993).

5. Evaluation of shared innovations and convergence

It is evident that all grammatical parallels cannot be indications of shared historical innovations. Linguistic universals and similarities in the typological structure of languages undoubtedly enhance the number of syntactic and functional parallels between languages with the same origin. There are functional basic categories that are likely to be manifested morphologically in one way or another and there are significant implications in the order of syntactic core arguments. Inflectional categories have basic functional properties that distinguish them from one another. As a rule, cases express certain grammatical relations, and individual units such as case suffixes have some basic properties in different languages.

In the previous section it was claimed that the listed characteristics demonstrate a major grammatical change in the Finnic and Mordvinic languages, and the close historical relationship between these languages may be evidenced in such changes. There are other parallels between the Finnic and Mordvinic languages that simply originate from an earlier shared protolanguage, such as Proto-Uralic, or are simply typologically so common that they cannot be used to draw historical conclusions. The genitive, for instance, is the case that marks the possessor and typically occurs in a pre-nominal position. The Finnic and Mordvinic genitive suffix **-n* is of Proto-Uralic origin. Although the complement of most Saamic, Finnic and Mordvinic postpositions is in the genitive, this does

not prove that the syntactic structure [N[+GEN]+Postp] is a shared innovation of Saamic, Finnic and Mordvinic. Adpositional phrases that are morphosyntactically identical with genitive phrases (possessive constructions) very frequently occur in the world's languages (Bybee 1988: 353–354; Grünthal 2003b: 36). Although it has sometimes been assumed that historically the Uralic protolanguage displayed a postpositional phrase with a noun complement in the nominative (Majtinskaja 1982: 18–22; Ravila 1941: 129), it is more likely that those Uralic languages, namely Saamic, Finnic, Mordvinic and Samoyedic, that display a complement in the genitive have preserved the original construction, whereas those that do not, such as Permic and Ugric, have simply lost the Proto-Uralic genitive suffix **-n*.

As is the case with the genitive, there is a further parallelism between the Finnic partitive and the Mordvinic ablative (separative). They (as mentioned, both originating from the Proto-Uralic ablative **-tA*) are used for comparing two nouns, as in the Finnish *puu-ta korkea-mpi* [tree-PART high-COMP] 'taller than a tree', *mu-i-ta pare-mm-in* [other-PL-PART good-COMP-ADV] 'better than others' and the Erzya *ve-d'e čopoda* [night-ABL dark] 'darker than the night', *vadžá-do vadžá-sto* [beautiful-ABL beautiful-ADV] 'most beautifully' (Cygankin et al. 2000: 67–68; Hakulinen et al. 2004: 624–636). However, this similarity probably represents the historical structure as the morphosyntactic structure and is not a shared innovation as is the postpositional phrase. Ablative cases are very commonly used for the comparison of adjectival phrases in the Uralic languages, although the form of the ablative case depends on the local case system of the language at issue (Fuchs 1949; Grünthal 2005: 42–46; Raun 1949). Modern Finnish, for instance, displays the elative (LOCI-) in certain comparative constructions (Hakulinen et al. 2004: 634–635). Furthermore, the use of the ablative case is common in many Siberian languages (Kilby 1983: 51).

The most unambiguous examples of convergence are cases in which a given phenomenon has a limited distribution either in Finnic or Mordvinic. One of the few examples is the appearance of a definite declination of nouns in Veps (*kala-se* [fish-DEF] 'the fish', *mužik-se* [man-DEF] 'the man (male)') and Mordvinic (*lomańe-ś* [man-DEF] 'the man', *ošo-ś* [town-DEF] 'the town', *pando-ś* [mountain-DEF] 'the mountain') that historically originates from a suffixed demonstrative pronoun (*se* 'it') (Bartens 1996: 5–14; 1999: 83–84; Erkki Itkonen 1966: 257; Kettunen 1943: 397–404). In Mordvinic the morphologisation of definiteness was completed long ago and it is a productive inflectional category, whereas in Veps it is a more recent change that under certain conditions also occurs in other than postnominal position (Kettunen 1943: 417; Larjavaara 1986). Typologically, the use of demonstrative pronouns as markers of definiteness is common in the world's languages (Diessel 1999).

6. Discussion

The question as to whether some parallels between the Finnic and Mordvinic languages should be accounted for as shared innovations or convergence may further be considered in the light of lexical and other grammatical data. This article emphasises that there is still much to be learned regarding the historical relationship between the Uralic languages. The evidence from Finnic and Mordvinic grammatical elements suggests that this aspect should be more carefully examined in the analysis of the historical development. Place names and grammatical data are not mechanically compatible with lexical data and sound history. Yet, grammatical innovations can be mutually compared and placed into a more limited areal framework, depending on their distribution. Like sound changes and the stratification of loanwords, grammatical changes are not random processes. At best different changes can be organised by means of relative chronology into a chain of changes differing in age.

References

- Aikhenvald & Dixon 2001a = Aikhenvald, Alexandra Y. & R. M. W. Dixon (eds.): *Areal diffusion and genetic inheritance. Problems in comparative linguistics*. Oxford: Oxford University Press.
- Aikhenvald, Alexandra Y. & Dixon, R. M. W. 2001b: Introduction. – Aikhenvald & Dixon 2001a. 1–26.
- Aikio, Ante 2002: New and old Samoyed etymologies. – *Finnisch-Ugrische Forschungen* 57: 9–57.
- 2003: Suomen saamelaisperäisistä paikannimistä. – *Virittäjä* 107: 99–106.
- 2004: An essay on substrate studies and the origin of Saami. – Irma Hyvärinen, Petri Kallio & Jarmo Korhonen (eds.), *Etymologie, Entlehnungen und Entwicklungen. Festschrift für Jorma Koivulehto zum 70. Geburtstag*. Mémoires de la Société Neophilologique de Helsinki 63. Helsinki: Uusfilologinen yhdistys. 5–34.
- 2006: New and old Samoyed etymologies. (Part 2.) – *Finnisch-Ugrische Forschungen* 59: 9–34.
- Alhoniemi, Alho 1982: Eräitä näkökohtia mordvan nominaalisen predikaatin käytöstä. – *Lauseenjäsennyksen perusteet. Seminaari Seilissä 9.–10.9.1982*. Suomen kielitieteellisen yhdistyksen julkaisuja 9. Turku. 47–58.
- 1991: Zur Kasuszeichnung des Objekts im Mordwinischen. – *SKY 1991. Suomen kielitieteellisen yhdistyksen vuosikirja*. 18–30.
- 2001: Über die alten und neuen Lokalkasussuffixe im Tscheremissischen. – *Finnisch-Ugrische Forschungen* 56: 95–115.
- Bartens, Raija 1993: Permiläiset *l* ja *s* -koaffiksit. – *Sananjalka* 35: 23–42.
- 1996: Über die Deklination im Mordwinischen. – *Finnisch-Ugrische Forschungen* 53: 1–113.

- Bartens, Raija 1999: *Mordvalaiskielten rakenne ja kehitys*. Mémoires de la Société Finno-Ougrienne 232. Helsinki: Suomalais-Ugrilainen Seura.
- 2000: *Permiläisten kielten rakenne ja kehitys*. Mémoires de la Société Finno-Ougrienne 238. Helsinki: Suomalais-Ugrilainen Seura.
- Bowern, Claire 2006: Another look at Australia as a linguistic area. – Yaron Matras, April McMahon & Nigel Vincent (eds.), *Linguistic areas. Convergence in historical and typological perspective*. New York: Palgrave Macmillan. 244–265.
- Budenz, József 1879: *Ueber die Verzweigung der ugrischen Sprachen*. Beiträge zur Kunde der indogermanischen Sprachen. B. 4. Göttingen.
- Bybee, Joan 1988: The diachronic dimension in explanation. – John A. Hawkins (ed.), *Explaining language universals*. Oxford: Basil Blackwell. 350–379.
- Campbell, Lyle 2006: Areal linguistics: A closer scrutiny. – Yaron Matras, April McMahon & Nigel Vincent (eds.), *Linguistic areas. Convergence in historical and typological perspective*. New York: Palgrave Macmillan. 1–31.
- Campbell, Lyle & Harris, Alice C. 1995: *Historical syntax in cross-linguistic perspective*. Cambridge studies in linguistics 74. Cambridge: Cambridge University Press.
- Carpelan, Christian 2000: Essay on archaeology and languages in the western end of the Uralic zone. – Anu Nurk, Triinu Palo & Tõnu Seilenthal (eds.), *Congressus Nomus Internationalis Fenno-Ugristarum 7.–13.8.2000 Tartu. Pars I. Orationes plenariae & Orationes publicae*. Tartu. 7–38.
- Carpelan, Christian & Parpola, Asko 2001: Emergence, contacts and dispersal of Proto-Indo-European, Proto-Uralic and Proto-Aryan in archaeological perspective. – Christian Carpelan, Asko Parpola & Petteri Koskikallio (eds.), *Early contacts between Uralic and Indo-European. Linguistic and archaeological considerations*. Mémoires de la Société Finno-Ougrienne 242. Helsinki: Suomalais-Ugrilainen Seura. 55–150.
- Cygankin, D. V. & Agafonova, N. A. & Imajkina, M. D. & Mosin, M. V. & Cypkajkina, V. P. & Abramova, E. A. 2000: *Ėrzjan' kel'. Morfemika, valon' teevema dy morfologija*. Saransk: Krasnyj Oktjabr'.
- Dahl, Östen 2001: Principles of areal typology. – Martin Haspelmath, Ekkehard König, Wulf Österreicher & Wolfgang Reible (eds.), *Language typology and language universals*. Berlin: Mouton de Gruyter. 1456–1470.
- Denison, Norman 1958: *The partitive in Finnish*. Suomalaisen Tiedeakatemia Toimituksia B 108. Helsinki: Suomalainen Tiedeakatemia.
- Diessel, Holger 1999: The morphosyntax of demonstratives in synchrony and diachrony. – *Linguistic Typology* 3: 1–50.
- Dixon, R. M. W. 1997: *The rise and fall of languages*. Cambridge: Cambridge University Press.
- Donner, Otto 1879: *Die gegenseitige Verwandtschaft der finnisch-ugrischen Sprachen*. Acta Societatis Scientiarum Fennicae 11. Helsinki.
- Erelt, Mati & Metslang, Helle 1997: Oma või võõras? – *Keel ja Kirjandus* 40: 657–668.
- Fuchs, D. R. 1949: Der Komparativ und Superlativ in den finnisch-ugrischen Sprachen. – *Finnisch-Ugrische Forschungen* 30: 147–230.
- Grünthal, Riho 2001: Indo-European echoes? Mordvin, Mari and Permic 'enter'. – *Folia Uralica Debrenciensia* 8: 189–198.

- Grünthal, Riho 2002: Prehistoric contacts between Mordvin and Indo-European. – Rogier Blokland & Cornelius Hasselblatt (eds.), *Finno-Ugrians and Indo-Europeans. Linguistic and literary contacts*. Studia Fenno-Ugrica Groningana 2. Maastricht: Shaker Publishing. 84–91.
- 2003a: Diachronic tendencies of local cases in the Uralic languages. – Marianne Bakró-Nagy & Károly Rédei (eds.), *Ünnepi kötet Honti László tiszteletére*. Budapest: MTA Nyelvtudományi Intézet. 140–151.
- 2003b: *Finnic adpositions and cases in change*. Mémoires de la Société Finno-Ougrienne 244. Helsinki: Suomalais-Ugrilainen Seura.
- 2005: Miksi itämerensuomessa on prepositioita? – *Virtittäjä* 109: 28–51.
- Hajdú, Péter 1972: The origins of Hungarian. – L. Benkő & Imre Samu (eds.), *The Hungarian language*. The Hague: Mouton. 15–48.
- 1973: *Bevezetés az uráli nyelvtudományba*. Budapest: Tankönyvkiadó.
- Häkkinen, Kaisa 1984a: *Suomen kielen vanhimmasta sanastosta ja sen tutkimisesta. Suomalais-ugrilaisten kielten etymologisen tutkimuksen perusteita ja metodiikkaa*. Turun yliopiston suomalaisen ja yleisen kielitieteen laitoksen julkaisuja 17. Turku.
- 1984b: Wäre es schon an der Zeit, den Stammbaum zu fällen? – *Ural-Altäische Jahrbücher. Neue Folge* 4: 1–24.
- 1997: Uralilainen muinaiskulttuuri sanahistorian valossa. – Riho Grünthal & Johanna Laakso (eds.), *Oekeeta asijoo. Commentationes Fenno-Ugricae in honorem Seppo Suhonen*. Mémoires de la Société Finno-Ougrienne 228. Helsinki: Suomalais-Ugrilainen Seura. 188–194.
- 1999: Esisuomalainen pyyntikulttuuri ja maanviljely sanastohistorian kannalta. – Paul Fogelberg (ed.), *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan*. Bidrag till kännedom av Finlands natur och folk 153. Helsinki: Finska Vetenskaps-Societeten. 159–173.
- 2001: Prehistoric Finno-Ugric culture in the light of historical lexicology. – Christian Carpelan, Asko Parpola & Petteri Koskikallio (eds.), *Early contacts between Uralic and Indo-European. Linguistic and archaeological considerations*. Mémoires de la Société Finno-Ougrienne 242. Helsinki: Suomalais-Ugrilainen Seura. 169–186.
- Häkkinen, Kaisa & Lempiäinen, Terttu 1996: Die ältesten Getreidepflanzen der Finnen und ihre Namen. – *Finnisch-Ugrische Forschungen* 53: 115–182.
- Hakulinen, Auli & Vilkuna, Maria & Korhonen, Riitta & Koivisto, Vesa & Heinonen, Tarja Riitta & Alho, Irja 2004: *Iso suomen kielioppi*. Suomalaisen Kirjallisuuden Seuran Toimituksia 950. Helsinki: Suomalaisen Kirjallisuuden Seura.
- Hakulinen, Lauri 1979: *Suomen kielen rakenne ja kehitys*. Neljäs, korjattu ja lisätty painos. Helsinki: Otava.
- Haspelmath, Martin 1998: Does grammaticalization need reanalysis? – *Studies in Language* 22: 315–351.
- 2004: How hopeless is genealogical linguistics, and how advanced is areal linguistics? – *Studies in Language* 28: 209–223.

- Honti, László 1998: Ugrilainen kantakieli – erheellinen vai reaalin hypoteesi. – Riho Grünthal & Johanna Laakso (eds.), *Oekeeta asijoo. Commentationes Fenno-Ugricae in honorem Seppo Suhonen*. Mémoires de la Société Finno-Ougrienne 228. Helsinki: Suomalais-Ugrilainen Seura. 176–187.
- Itkonen, Erkki 1946: Zur Frage nach der Entwicklung des Vokalismus der ersten Silbe in den finnisch-ugrischen Sprachen, insbesondere im Mordwinischen. – *Finnisch-Ugrische Forschungen* 29: 222–337.
- 1960: Die Vorgeschichte der Finnen aus der Perspektive eines Linguisten. – *Ural-Altische Jahrbücher* 32: 2–24.
- 1961: *Suomalais-ugrilaisen kielen- ja historian tutkimuksen alalta*. Tietolipas 20. Helsinki: Suomalaisen Kirjallisuuden Seura.
- 1966: *Kieli ja sen tutkimus*. Porvoo: WSOY.
- 1971–72: Über das Objekt in den finnisch-wolgaischen Sprachen. – *Finnisch-Ugrische Forschungen* 39: 153–213.
- 1973: Zur Geschichte des Partitivs. – *Finnisch-Ugrische Forschungen* 40: 278–339.
- Itkonen, Esa 1998: Sukupuu ja kontakti. – *Virittäjä* 102: 96–103.
- Janhunen, Juha 1981: Uralilaisen kantakielen sanastosta. – *Journal de la Société Finno-Ougrienne* 77: 219–274.
- 1982: On the structure of Proto-Uralic. – *Finnisch-Ugrische Forschungen* 44: 23–42.
- Kallio, Petri 1998: Vanhojen balttilaisten lainasanojen ajoittamisesta. – Riho Grünthal & Johanna Laakso (ed.), *Oekeeta asijoo. Commentationes Fenno-Ugricae in honorem Seppo Suhonen sexagenarii 16.V 1998*. Mémoires de la Société Finno-Ougrienne 228. Helsinki: Suomalais-Ugrilainen Seura. 209–217.
- 2006: Suomen kantakielten absoluuttista kronologiaa. – *Virittäjä* 110: 2–25.
- Keresztes, László 1999: *Development of Mordvin definite conjugation*. Mémoires de la Société Finno-Ougrienne 233. Helsinki: Suomalais-Ugrilainen Seura.
- Kettunen, Lauri 1943: *Vepsän murteiden lauseopillinen tutkimus*. Mémoires de la Société Finno-Ougrienne 86. Helsinki: Suomalais-Ugrilainen Seura.
- Kilby, David 1983: Universal and particular properties of the Ewenki case system. – *Papers in linguistics* 16–3/4: 45–74.
- Koivulehto, Jorma 1999a: Varhaiset indoeurooppalaiskontaktit: aika ja paikka lainasanojen valossa. – Paul Fogelberg (ed.), *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan*. Bidrag till kännedom av Finlands natur och folk 153. Helsinki: Finska Vetenskaps-Societeten. 207–236.
- 1999b: *Verba mutuata. Quae vestigia antiquissimi cum Germanis aliisque Indo-Europaeis contactus in linguis Fennicis reliquerint*. Mémoires de la Société Finno-Ougrienne 237. Helsinki: Suomalais-Ugrilainen Seura.
- 2004: Mistä lähtien suomea Suomessa? – Miia Pesonen & Harri Westermarck (eds.), *Studia Generalia. Suomen kansa: mistä ja mikä?* Helsinki: Helsingin yliopiston vapaan sivistystyön toimikunta. 81–94.

- Koivulehto, Jorma 2006: Arkeologia, kielihistoria ja jatkuvuusteoria. – Mervi Suhonen (ed.), *Arkeologian lumoa synkkyyteen. Artikkeleita Christian Carpelanin juhlapäiväksi*. Helsinki: Helsingin yliopiston kulttuurien tutkimuksen laitos. 153–165.
- Korhonen, Mikko 1981: *Johdatus lapin kielen historiaan*. Suomalaisen Kirjallisuuden Seuran toimituksia 370. Helsinki: Suomalaisen Kirjallisuuden Seura.
- 1991: Remarks on the structure and history of the Uralic case system. – *Journal de la Société Finno-Ougrienne* 83: 163–180.
- Laakso, Johanna 1999a: Language contact hypotheses and the history of Uralic morpho-syntax. – *Journal de la Société Finno-Ougrienne* 88: 59–72.
- Larjavaara, Matti 1986: *Itämerensuomen demonstratiivit. Karjala, aunus, lyydi ja vepsä*. Suomalaisen Kirjallisuuden Seuran toimituksia 433. Helsinki: Suomalaisen Kirjallisuuden Seura.
- 1991: Aspektuaalisen objektin synty. – *Virittäjä* 95: 372–408.
- Lehtinen, Tapani 2005: Jubilaarin jälkisanana pääsiäisenä 2005. – Johanna Vaattovaara, Toni Suutari, Hanna Lappalainen & Riho Grünthal (eds.), *Muuttuva muoto. Kirjoituksia Tapani Lehtisen 60-vuotispäivän kunniaksi*. Kieli 16. Helsinki: Helsingin yliopiston suomen kielen laitos. 155–178.
- Majtinskaja, Klara 1982: *Služebnye slova v finno-ugorskih jazykah*. Moskva: Nauka.
- McMahon, April & McMahon, Robert 2006: Keeping contact in the family: approaches to language classification and contact-induced change. – Yaron Matras, April McMahon & Nigel Vincent (eds.), *Linguistic areas. Convergence in historical and typological perspective*. New York: Palgrave Macmillan. 51–74.
- Metslang, Helle 2001: On the developments of the Estonian aspect: The verbal particle *ära*. – Östen Dahl & Maria Koptjevskaja-Tamm (eds.), *Circum-Baltic languages. Typology and contact 2*. Amsterdam: John Benjamins. 443–479.
- MK 2000 = *Mokšen' kjal'. Morfologija*. Sërmatf-tif N. S. Al'amkinon' kjadjala. Saransk: Krasnyj Oktjabr'.
- Mullonen, Irma 2002: *Toponimija Prisivir'ja – problemy ètnojazykogo kontaktirovanija*. Petrozavodsk: Petrozavodskij gosudarstvennyj universitet.
- Rätsep, Huno 2002: *Sõnaloo raamat*. Tartu: Ilmamaa.
- Raun, Alo 1949: Zur Komparation der Substantive im Finnisch-ugrischen. – *Finnisch-Ugrische Forschungen* 30: 242–247, 376–389.
- Ravila, Paavo 1941: Über die Verwendung der Numeruszeichen in den uralischen Sprachen. – *Finnisch-Ugrische Forschungen* 27: 1–136.
- Rédei, Károly 1996a: Zur Geschichte der PU-PFU Kasussystems. Die Rolle der Koaffixe in der Herausbildung des Deklination. – Lars-Gunnar Larsson (ed.), *Laponica et Uralica*. *Studia Uralica Uppsaliensia* 26. 257–271.
- 1996b: A magyar alaktan uráli (finnugor) háttere. – *Magyar Nyelv* 92: 129–138.
- Riese, Timothy 1992–1993: Der Translativ in den uralischen Sprachen. – *Linguistica Uralica* 28: 251–261; 29: 1–20.
- Ross, Malcolm 2001: Contact-induced change in Oceanic languages in North-West Melanesia. – Aikhenvald & Dixon 2001a. 134–166.
- Saarikivi, Janne 2004: Über das saamische Substratnamengut in Nordrußland und Finnland. – *Finnisch-Ugrische Forschungen* 58: 162–234.

- Saarikivi, Janne 2006: *Substrata Uralica – studies on Finno-Ugrian substrate in Northern Russian dialects*. Tartu.
- Saarikivi, Janne & Grünthal, Riho 2005: Itämerensuomalaisten kielten uralilainen tausta. – Johanna Vaattovaara, Toni Suutari, Hanna Lappalainen & Riho Grünthal (eds.), *Muuttuva muoto. Kirjoituksia Tapani Lehtisen 60-vuotispäivän kunniaksi*. Kieli 16. Helsinki: Helsingin yliopiston suomen kielen laitos. 111–146.
- Salminen, Tapani 1999: Euroopan kielet muinoin ja nykyisin. – Paul Fogelberg (ed.), *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan*. Bidrag till kändedom av Finlands natur och folk 153. Helsinki: Finska Vetenskaps-Societeten. 13–26.
- 2002: Problems in the taxonomy of the Uralic languages in the light of modern comparative studies. – *Lingvističeskij bespredel. Sbornik statej k 70-letiju A. I. Kuznecovoj*. Moskva: Izdatel'stvo MGU. 44–55.
- Sammallahti, Pekka 1979: Über die Laut- und Morphemstruktur der uralischen Grundsprache. – *Finnisch-Ugrische Forschungen* 43: 22–66.
- 1984: Saamelaisten esihistoriallinen tausta kielitieteen valossa. – *Suomen väestön esihistorialliset juuret*. Bidrag till kändedom av Finlands natur och folk 131. Helsinki: Finlands Vetenskaps-Societeten. 137–156.
- 1988: Historical phonology of the Uralic languages. – Denis Sinor (ed.), *The Uralic languages. Description, history and foreign influences*. Leiden: E. J. Brill. 478–554.
- 1998: *The Saami languages. An introduction*. Käräsjohka: Davvi Girji.
- 1999: Saamen kielen ja saamelaisten alkuperästä. – Paul Fogelberg (ed.), *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan*. Bidrag till kändedom av Finlands natur och folk 153. Helsinki: Finska Vetenskaps-Societeten. 70–90.
- 2001: The Indo-European loanwords in Saami. – Christian Carpelan, Asko Parpola & Petteri Koskikallio (eds.), *Early contacts between Uralic and Indo-European. Linguistic and archaeological considerations*. Mémoires de la Société Finno-Ougrienne 242. Helsinki: Suomalais-Ugrilainen Seura. 397–415.
- Serebrennikov, B. A. 1967: *Istoričeskaja morfologija mordovskih jazykov*. Moskva: Nauk.
- Setälä, E. N. 1926: Kielisukulaisuus ja rotu. – A. Kannisto, E. N. Setälä, U. T. Sirelius & Yrjö Wichmann (toim.), *Suomen suku* 1. Helsinki: Otava. 31–85.
- Stolz, Thomas 2006: All or nothing. – Yaron Matras, April McMahon & Nigel Vincent (eds.), *Linguistic areas. Convergence in historical and typological perspective*. New York: Palgrave Macmillan. 32–50.
- Szj, Enikő 1990: *Finnugor hol-mi I*. Budapest: Tankönyvkiadó.
- Wickman, Bo 1955: *The form of the object in the Uralic languages*. Uppsala universitetets årskrift 1955:6. Uppsala.
- Zaicz, Gábor 2005: Volgai finnugor kor? – *Folia Uralica Debreceniensia* 12: 121–132.