

Areal variation in structure types of Saami place names

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1. Introduction

In my doctoral thesis and in a subsequent study (Valtonen 2014), I studied the place names of four Saami communities, each of them speaking a different Saami language. Back then, my main intention was to do a basic analysis of structure and vocabulary of Saami place names and to study how the connection with other cultures and languages is reflected in place names. Even then, I realized that the research materials that I collected and the basic analysis that I conducted would provide suitable material for other linguistic analyses as well.

In this article, I return to the same materials and some of the results reached in that study (Valtonen 2014). However, I will also deal with some new materials and with completely new questions. The materials concerned here are place name samples from South Saami (southern and northern dialects), North Saami (Torne and the eastern inland dialect), Aanaar or Inari Saami (northern dialect) and Skolt Saami (southern dialect). The main objective is to show how place names can be used to study areal variation of Saami languages.

In addition to interdisciplinary toponomastics, i.e., place name studies, I will base my analysis on results gained in studies of cognitive linguistics. The long-term linguistic behavior of the users of a language is reflected in the typology of place name systems. The place names, in turn, have qualities that make it possible to connect linguistic behavior to time (often) and space (always). In this paper, I will first use onomastic and cognitive linguistic theories to argue and explain why place names are such good indicators of areal differences. In the latter part, I will give several examples of the results that can be obtained with this method.

The results provide an independent interpretation of the areal variation of Saami languages and help to recognize historical areal innovations or locally

loaned features as well as areal interdependences. These results can be compared with the results of dialectology or studies of areal variation based on reconstruction of historical evolution of related languages (e.g., Rydving 2013 based on vocabulary; Sammallahti 1998 based on inflectional morphophonology). This approach has also been inspired by Asbjörn Nesheim's (1967) studies on areal distribution of culture-specific words. By comparing and combining these independent results, we can achieve much more information about the prehistorical, early historical, and historical times of Saami cultures and languages.

2. Cognitive linguistics and place names

To give a place a name is universal behavior of human beings: some sort of place names are found in all known human languages (Ainiala et al. 2016, 13, 64). Another universal phenomenon is human beings' natural tendency to categorize everything and to interpret and convert everything new to fit already-existing categories (Lakoff 1987, xvii, 5–8). Place names are one way to categorize the surroundings of human communities: named places are defined as entities and only somehow meaningful places are named (see, e.g., Ainiala et al. 2016, 17–19).

Members of a category share certain features that make them recognizable as members of that category. They might be prototypical, i.e., be easily recognized as members due to some features that are shared by most of other members of that category, or they might be atypical, i.e., they share only some features with other members of that category. Often-given examples of prototypical and atypical members of a category are sparrow and penguin, respectively, which represent the category of birds. Individual place names, as with any other words, can be understood as prototypical or atypical representatives of their category. A typology based on the most common features of a sample of linguistic material is a structured description of categories, i.e., typologically determined categories are representations of prototypes.¹ (Sjöblom 2006, 71–73.)

According to Valtonen (2014), a prototypic Saami place name is a compound of two stems—in onomastics, known as name elements—of which the latter (generic part) is a terrain-describing appellative in nominative singular and the first (specific part), a substantive in nominative singular, e.g.,

¹ About prototype theory in general, see Dabrowska & Divjak 2015, 68; Lakoff 1987, 5–9.

SaAn *Kedgi|vyeppee*, ‘Stone Bay’.² Approximately one-third of the Saami place names that I have studied belong to this category. Second in rank are place names with another place name in genitive singular as a specific part, e.g., SaSk. *Čiŋŋlōsjääura|vääraž*, ‘Deep Lake’s Mountain’. Atypical Saami place names are, for instance, names with a particle, such as a sound-describing onomatopoeic lexeme, as a specific part, e.g., SaSk. *Šarr|čuä’lmm*, ‘Šarr [onomatopoeic lexeme describing the babbling sound of a brook] Strait’.

It is not a surprise that the place names of North Germanic and Finnic languages, the nearest neighboring languages of the Western and some of the Eastern Saami languages, also share the same prototypes. It is, however, noteworthy that the place names of the Russian language often follow another pattern: the terrain appellative is not a mandatory (generic) part of a Russian place name but an additional qualifier that can be added when needed. The Russian place names of Kola peninsula are often derivatives in which a derivational suffix is used instead of a generic part. (Kert 2005, 40; Senkevich-Gudkova 1963, 27.)

As a category of words, place names have some qualities that make them special. First, place names comprise a distinguished category of words (proper nouns) since their referent is always one definite place.³ This means that place names are linguistic utterances with a definite spatial connection. If a linguistic phenomenon is attested in a place name, this phenomenon is also tied to the referent because place names are always given in the same place or in the vicinity of the named place. It also means that when the referent was named, the language community that gave the place name used this phenomenon in their daily language and that they were physically there where the named place is.⁴ (Ainiala et al. 2016, 15–19; Coates 2016, 525–526, 538–539.)

A second quality that makes place names special is that place names are parts of systems that are called Idealized Cognitive Models or ICMs (see Lakoff 1987, 68–74), also known as schemas (see, e.g., Dabrowska & Divjak 2015, 67; Langacker 1987, 132–135; Tuggy 2012, 83–85). Schemas are organized cognitive memory structures of mind. They help us to construct in

² For a thorough description and definitions of the terminology used in this article and generally in Finnish and Saami onomastics see, e.g., Ainiala et al. 2016; Helander 1991; Kiviniemi 1990; Valtonen 2014.

³ The focus of this paper is aimed at the place names with true-life referents. This means that I do not take in account, e.g., the viewpoints of literary onomastics, a sub-discipline that is concentrated on names with imaginary referents (see, e.g., Ainiala et al. 2016, 255–264).

⁴ In my material there are no planned official place names, only names that have been given spontaneously by the language community. The method I use in this article is not suitable for analyzing planned place names because they have different naming principles.

our minds models of the objective world and to organize in simplified and abstracted form the information that we perceive with our senses (Lakoff 1987, xi–xii, xiv–xv, 58, 68; Tuggy 2012, 83–84). Individual place names are nodes or links in these multidimensional cognitive networks that comprise a schema (Lakoff 1987, 69–70; Sjöblom 2006, 73). Because place names have manifold connections in a place name schema as well as with other schemas, they carry and accumulate rich language- and culture-specific meanings (see also Ainiala et al. 2016, 17–20).

Place name schemas are coherent systems that follow language- and culture-specific rules, i.e., rules that regulate the functions of and interaction between schemas. These rules are called place name grammar (see, e.g., Ainiala et al 2016, 36, 63; Zilliacus 2002, 142–143). They regulate the naming process, e.g., which places are named and what kind of linguistic structures and themes are accepted for a name. Place name grammar also tells how names should be used in varying linguistic and cultural contexts. Place name grammar is constantly but very slowly changing due to language's internal evolution, changes in the world or influences acquired from other languages and cultures. The place name grammar of genetically related languages is often quite similar, but similarities are also born in close contact between unrelated languages or, at least theoretically, independently by chance (see Valtonen 2019, 8–16).

A third quality that makes place names special is that place names of major referents are durable, often hundreds, but sometimes even thousands, of years old, and conservative (see, e.g., Ainiala 1997, 233–234; Pamp 2007, 88–89). They can preserve linguistic phenomena that were used during the naming period but have otherwise become extinct in a language. In addition to the fact that individual place names can be very old, the place name schemas that provide prototypical place name models or molds that are used when new place names are created are even more durable than individual names and change very slowly. This means that place names and place name systems are also a great repository of old local linguistic innovations and loans. (Ainiala et al. 2016, 16–17, 21–22, 36, 79; Coates 2016, 525–529, 534–536; Kiviniemi 1990, 121, 207–209; Sjöblom 2006, 72–73.)

These three qualities make place names excellent material for diachronic areal studies. When a place name is given, it is based on the local linguistic and cultural model, i.e., place name system or schema, which regulates its content, structure, and use. It is from that moment connected to a certain location, i.e., the referent. The place name and its linguistic features can be preserved in a name connected to this location even though the linguistic context around the named place would be changing. Sometimes place names

have preserved loans, such as loan words or loaned constructions, from other languages or local linguistic innovations. These loans and innovations are stored in the place name system and can later be attested as areal differences. (See Fig. 1.)

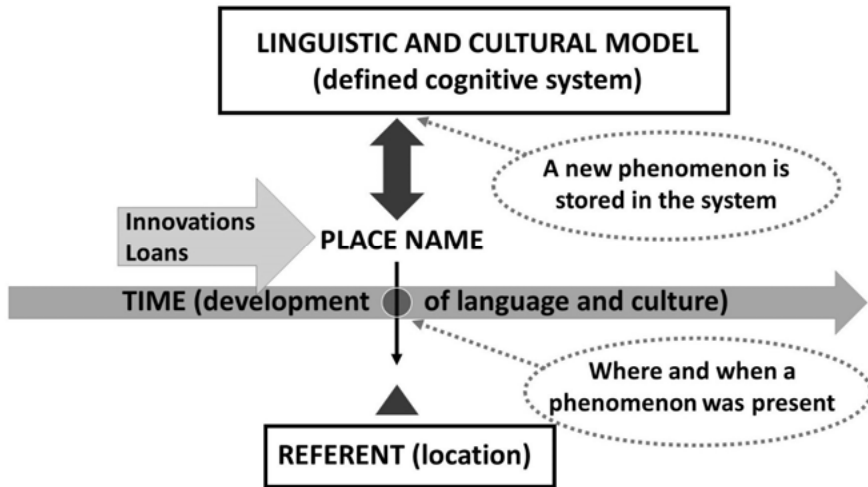


Figure 1. The theoretical model that describes place names’ ability to capture and preserve linguistic innovations and loans and to connect them with permanent locus.

3. Method and research material

A sample of place names can be divided into typological categories according to many features, such as the naming principles, i.e., the themes of place names (see, e.g., Ainiala et al. 2016, 72–75; Kiviniemi 1990, 119–162), type of referents (see, e.g., Aalto 2019), and vocabulary or structure of names (see, e.g., Valtonen 2014). All these categorizations open one important aspect of a place name system and add to our understanding of its nature. However, when it comes to contrastive studies based on several place name systems, the systematic categorization based on structure gives the most precise results. The reason is that the grammatical rules that linguistic constructions are based on represent such a high abstraction level that they are almost subconscious in nature and followed automatically. This means that grammar is not in the acknowledged core of the naming process but only provides unconsciously understood linguistic limits for the process. In addition, it has been noted that it is not common that influences coming from other languages and cultures would be borrowed to a morphological system. However, place names are as

subject to normal phonetic change as any other word of a language. (Coates 2016, 539; Lakoff 1987, 6, 13; Sankoff 2013, 11–13.)

By comparing the structure of Saami place names, it is possible to learn which constructions are attested, which are common, and which are uncommon. Such knowledge helps, for instance, to create convincing place name etymologies, since constructions that are common now were often common already hundreds of years before and vice versa. The conservative natures of Saami place name systems can be attested by studying old maps and other old documents.⁵ For instance, in many Saami languages the genitive singular and genitive plural are distinguished by only one sound at the end of the stem. If a historical place name or name borrowed from a Saami language to another language can be reconstructed as either of those, it is more convincing to propose genitive singular since genitive plural is extremely rare in present-day and historically recorded place names of Saami languages (Valtonen 2014, 272). Typology is a tool for source criticism that can provide limits of plausible interpretations (for principles of source criticism in etymological onomastic studies, see Aikio, A. 2007.) Due to spatial connection, the typology based on structure can also be used to study areal variation among place name systems of Saami languages. In such studies the typological similarities can be seen on distribution maps as concentrations or blank spaces that represent the original area of past innovations and contacts.

Valtonen (2014, 200–222) presents a method for dividing place names of Saami languages into categories based on their syntactic structure, morphology, morphophonology, and, in some special categories, also semantics. The method is simple. First, the place names are divided into syntactic parts (i.e., name parts), to a specific part and to a generic part that most often in Saami languages are stems of a compound (for dividing rules, see Ainiala et al. 2016, 36–37, 71–82; Valtonen 2014, 200–202). The division is marked with a pipe (|) in the examples. The further analysis is based mainly on specific parts since the generic parts are most often in the nominative,⁶ which makes them uninteresting from a comparative point of view.

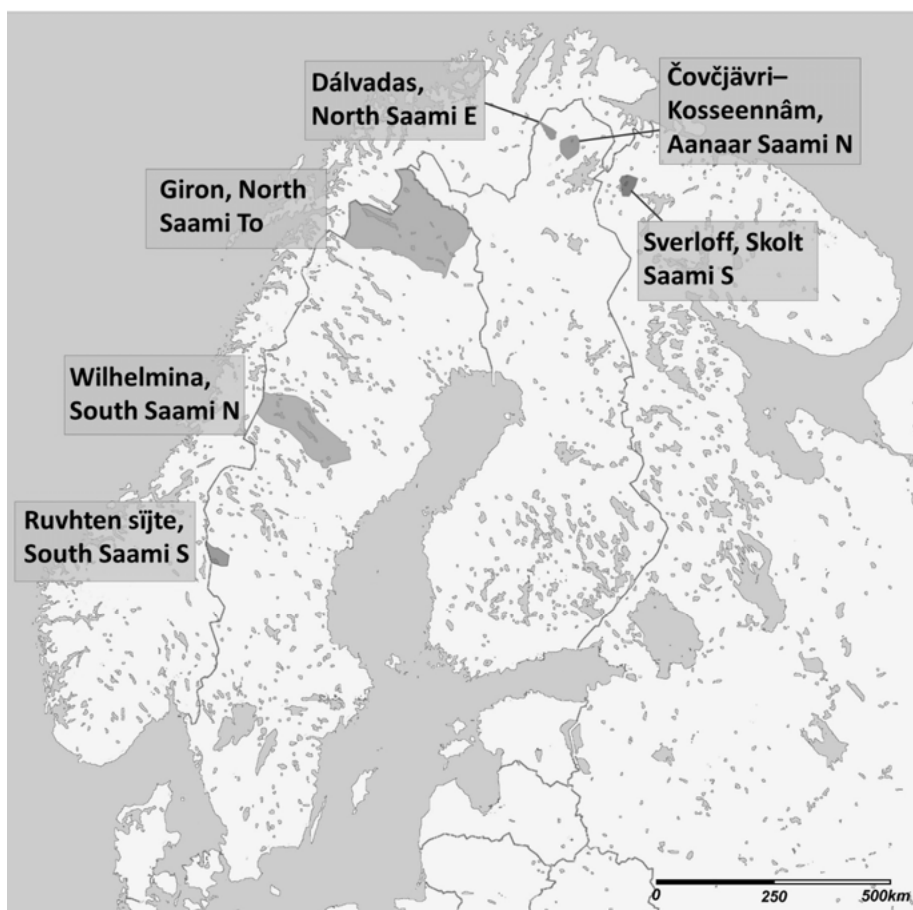
The place names in Valtonen (2014) are further categorized according to the morphology, morphophonology and semantics of the specific part. In addition, there are separate structure groups for place names with only one

⁵ E.g., old taxation documents, Jonas Persson Gedda and Anders Olofsson Holm's map and other documents from Ume Lappmark of 1671 (see Norstedt 2011), Olof Tresk's map and description of Torne and Kemi Lappmark of 1642–1643 (see Tresk 1928), and Peter Schnitler's maps and documents of the border region between Denmark(-Norway) and Sweden of 1742–1745 (see Schnitler 1742–1745).

⁶ For a special type in which the basic form is in genitive case only found in South Saami, see Valtonen 2014, 208, 210–212.

name part (typically the generic part), place names with a specifying modifier as the specific part, place names with loaned name elements (hybrid place names) and place names that are unanalyzable because the meaning is unclear (Valtonen 2014, 203–222). The two latter types are not discussed in this article, but shortening of unstressed middle name elements (reduction) and the number of name elements, i.e., the number of stems in a place name, are taken in account as structural phenomena. When counting the number of name elements, each stem (i.e., a name element) with its case endings or derivational suffixes is counted as one. In compound words, each separable stem is counted as one. The method of counting the number of name elements is adopted from Kiviniemi (1990, 91; see also Valtonen 2014, 267).

In this article, I will present examples of analyses that can be made with the above-described method. It is worth keeping in mind that the main objective of this article is to introduce the method, not the results. My material consists of six separate place name samples. Four of them are the materials that were analyzed in Valtonen (2014). These are 168 South Saami (southern dialect) place names (Ruvhten sįjte, Herjedaelie/Härjedalen, Sweden); 222 North Saami (eastern inland dialect) names (Dálvadas, Ohcejohka/Utsjoki, Finland); 561 Aanaar or Inari Saami (northern dialect) names (Čovčjävri and Kosseennâm areas, Aanaar/Inari, Finland) and 655 Skolt Saami (southern dialect) names (Sverloff family area, Suõ'nn'jelsijdd/Suonikylä/Songelsk, Peäccam/Petsamo/Pechenga, Russia). For the purposes of this article, I have additionally analyzed two other samples: 1747 North Saami (Torne dialect) place names of the Giron/Kiruna municipality (Sweden) and a sample of 569 South Saami (northern dialect) names of the Vualtjere/Vilhelmina municipality (Sweden). (See Map 1.) In addition, I will make some minor notes on place names of Kildin Saami, Ume Saami and (historical) Kemi Saami.



Map 1. Studied areas, languages, and dialects.

The major difference between the materials in Valtonen (2014) and the materials analyzed for the purposes of this article is that the first mentioned are based on detailed archive studies, but the two newer materials are map names uploaded from the internet service *Kartsök och Ortnamn* provided by the Lantmäteriet, i.e., the Swedish Mapping, Cadastral and Land Registration Authority.⁷ In archive collections, it is possible to take into account the natural variation of a place name system, but on maps, only one name variant can be displayed. This means that the materials from Giron and Vuoltjere do not represent the whole spectrum of variation. However, it is worth remembering that place names printed on maps of Nordic Countries are real place names used by real language communities. It is equally important to understand that

⁷ Since 2019 when the present material was uploaded, the internet service *Kartsök och Ortnamn* (kso.etjanster.lantmateriet.se/#) has been replaced by a new, very similar internet service called *Ortnamn* at ortnamn.lantmateriet.se/.

map names present only a sample of the real place name heritage. Note also that the areas of Giron and Vuoltjere displayed on Map 1 represent whole municipalities even though most Saami place names can be found in the western or the more remote parts of those communities. Other studied areas, Ruvhten s̄ijte, Dálvadas, Čovčjävri–Kosseennâm, and Sverloff family area, are displayed as the members of the communities have defined them (see Valtonen 2014, 78–193).

Place names of Saami languages share many features with place name systems of other North European languages. Especially closely related are the place name systems of Finnic languages, especially Karelian, but Saami place name systems also share many features with place name systems of North Germanic languages. It is noteworthy that, when compared with the Russian place name system(s), the differences are more distinctive, as described above. Since the major structure-type categories of place name systems of Saami languages are mostly similar to the structure-type categories of the closest neighbor languages or we are lacking detailed comparable information, one should be very careful when comparing these categories between Saami languages. From the viewpoint of source criticism, it would be impossible to tell whether the differences are caused by differences between Saami languages or only by influence from the majority languages. Because of this, I will examine the morphological differences by analyzing only the marginal constructions that are not typical in neighbor languages. However, this means that some of these structure types that I present are very rare. Because of this, the results that I present should be read as preliminary approximations, not as definitive truth.

In this article, I have chosen to take as examples place names with a specific part that is a personal name, an action nominal (verbal noun), an attributive adjective or a specifying modifier. In addition, I will present some areal differences of other constructions: place names with shortening of unstressed middle name elements (reduction) and number of name elements. The purpose of this article is to present the method, and I want to emphasize that numerally and spatially, more comprehensive materials can provide more convincing results than what I can present here. More comprehensive data would also make it possible to analyze a wider selection of structure types without fear that the borrowed and local linguistic innovations of the naming systems would be as easily confused with each other.

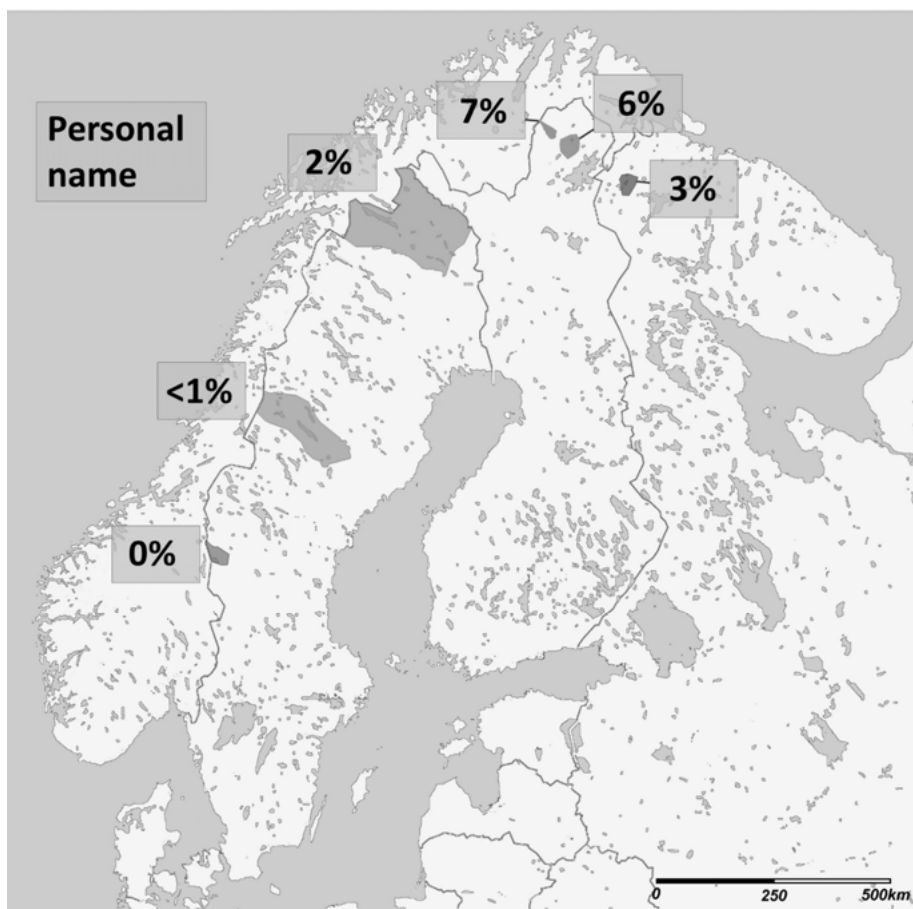
4. Results

4.1 Personal name as a specific part

Place names with a personal name as a specific part⁸ have a surprising areal distribution. They are common in Dálvadas (7% of all the names of this material) and Čovčjävri–Kosseennâm (6%), less common in Giron (2%) and Sverloff family area (3%), but nonexistent in Ruvhten sijte and only one place name, *Meerken|jaevrie*, ‘Meerke’s Lake’, is found in Vuoltjere. The eastern inland dialects of North Saami and Aanaar Saami seem to belong to the core area of this phenomenon, whereas the phenomenon seems to be clearly less typical in the surrounding Torne Saami and Skolt Saami languages. In South Saami, on the other hand, this structure type does not appear to be among the prototypical place name types at all. (See Map 2.) Because of the limited material I am dealing with, it is impossible to say where the borderline between the northern and southern area goes. However, it is noteworthy that in the map of Ume Lappmark, drawn by Jonas Gedda and Anders Holm in 1671, there are some place names that seem to include a personal name, e.g., *Ouls Jauri* ~ *Oulus Jaur* ~ *Ohlss Jauri*, ‘Åvl(o)s’s Lake’ and *Clemetz-Jauri*, ‘Clemet’s ~ Clemets(en)’s Lake’ (Norstedt 2011, 199, 206). This area is only about 100 kilometers north of the northernmost South Saami area.

According to Nicolaisen (1986), in the languages of the world, on average, 10 percent of place names include a personal name. Kiviniemi (1986) writes that from 10 to 15 percent of Finnish place names have a personal name as one name element. From this perspective, all of the studied Saami place name systems differ from the average, but South Saami material is something truly special. To cross-check the result, I searched the 28 most common South Saami personal names from Swedish and Norwegian place name databases that include thousands of place names. The result was two South Saami place names that contain a personal name. *Meerken|jaevrie*, mentioned above, was one of them. Since personal names are common in the place names of the North Germanic languages (see, e.g., Nyström 2021, 59–101; Rygh 1898), the best explanation seems to be that the South Saami place name grammar includes a culture-specific rule that personal names do not belong to place names. At the present, it is impossible to say whether it is South Saami or Aanaar and North Saami eastern inland dialect that represents an innovation.

⁸ In this paper, family names, which are quite rare, have been included in this group. Personal names as specific parts are always in genitive, typically in genitive singular.



Map 2. Personal name as a specific part.

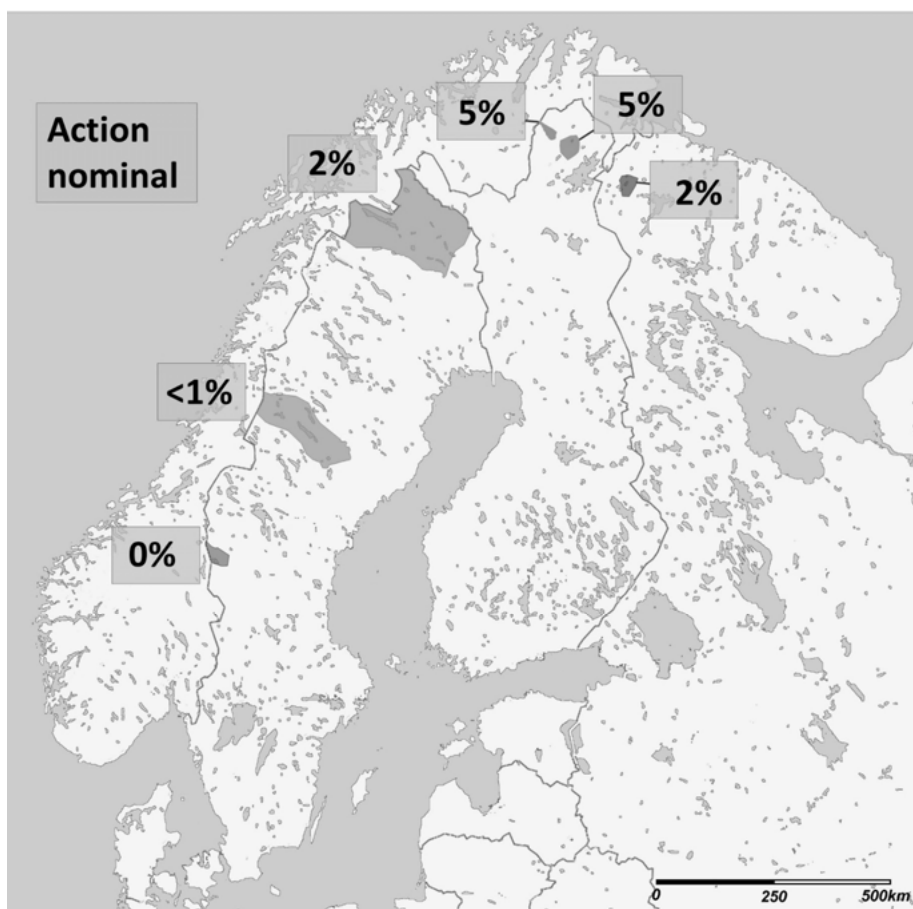
4.2 Action nominal as a specific part

Place names with action nominals, also known as verbal nouns, as a specific part have an interesting areal distribution. In South Saami, they are very rare: absent in the Ruvhten sįjte's material and less than 1 percent in Vualtjere's material, one example being *Orremeljohke*, 'Living River'. In Giron's and Sverloff family area's materials, there are 2 percent of such names. However, 5 percent of Dálvadas's and Čovčjävri–Kosseennâm's place names have an action nominal as a specific part, making it a rather common construction.

These results, shown in Map 3, indicate the following three areal differences: 1) South Saami with marginal use of action nominals; 2) North Saami Torne dialect and Skolt Saami with minor use of action nominals; and 3) North Saami eastern inland dialect and Aanaar Saami with quite commonly used action nominals—hence, the same situation as with personal names as a

specific part. Gedda and Holm's map of Ume Lappmark from 1671 presents evidence that action nominals have been used for a long time, at least in place names in an area close to present-day South Saami areas. In Máláge/Malå, some 100 kilometers northeast of Vuoltjere, Holm reports a place name *Pwelem Kidde/Brändwallen*—in modern Ume Saami orthography, *Buallám|geäddie*, 'Burned Dwelling Place' (Norstedt 2011, 207).

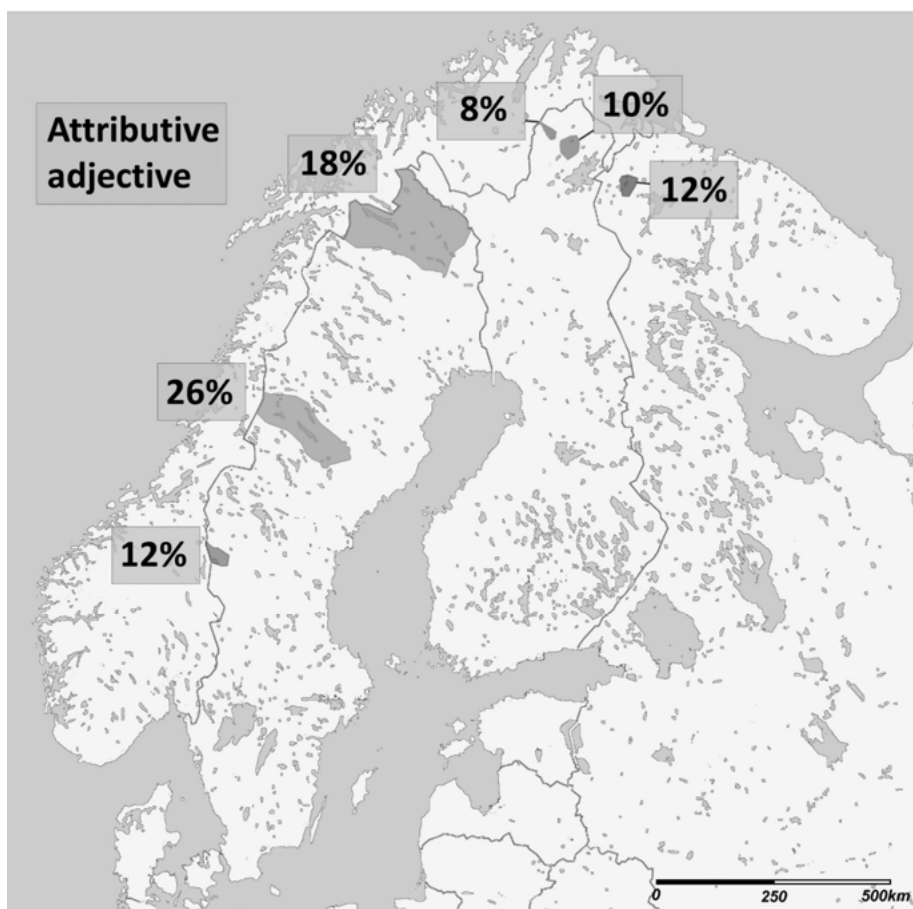
In addition, there are among Giron's, Dálvadas's, Čovčjävri–Kosseennâm's, and Sverloff family area's materials place names that have an action nominal and its object as a specific part. One such name is *Gazzagaikun|johka*, 'Hoof Breaking River' belonging to the only place name cluster in Giron of this type. By contrast, in Dálvadas, only 2 percent and in Čovčjävri–Kosseennâm 1 percent of place names have this construction. In Sverloff family area, the construction is not common. In Dálvadas, Čovčjävri–Kosseennâm and Sverloff family area, there are also place names constructed by an action nominal and its subject as a specific part, such as *Vue'zzkõckâm|jääuraž*, 'Reindeer Calf Drowning Lake'. These are, however, quite rare. In Čovčjävri–Kosseennâm area, there are in addition some examples of place names with an action nominal and its subject and object as specific parts, such as *Maati |Kähvivuoššâm|jávrááh*, 'Matti's Coffee Making Lakes'. Such North Saami place names are also found in Ohcejohka/Utsjoki, e.g., *Ville |Gámaláhppinvárri*, 'Ville's Shoe Losing Mountain'. These findings are in good agreement with the distribution described above and support the idea that Aanaar Saami and the eastern inland dialect of North Saami might represent an innovation area.



Map 3. Action nominal as a specific part.

4.3 Attributive adjective or specifying modifier as a specific part

Even though attributive adjectives are common as specific parts in compound place names of Saami languages, as well as in neighboring languages, I have decided to present these results because they reveal some phenomenon or phenomena that seem to have nothing to do with the majority languages. In the materials representing the Eastern Saami language, i.e., Aanaar and Skolt Saami languages, a moderate 10 and 12 percent of place names have an attributive adjective as a specific part. In Dálvadas, the number is a bit lower, 8 percent. But in Giron, 18 percent of place names have an attributive adjective as a specific part. However, the situation in South Saami is even more surprising: 26 percent of Vuoltjere's place names, but only 12 percent of Ruvhten sįjte's place names, have an attributive adjective as a specific part. (See Map 4.)

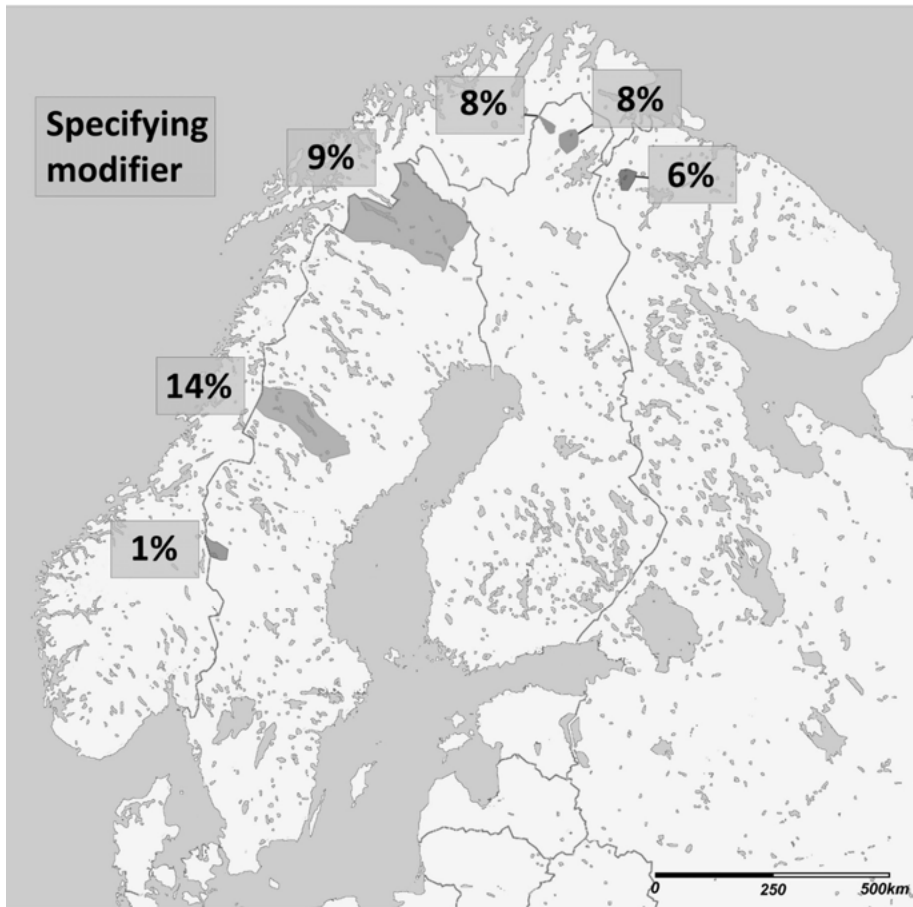


Map 4. Attributive adjective as a specific part.

The situation in Giron can hardly be explained as a Meänkieli influence, since according to Eero Kiviniemi (1990, 150), only 8 percent of Finnish place names have an attributive adjective as a specific part. However, it is important to look at another map (Map 5) that presents the percentage of place names with a specifying modifier as a specific part. This is a structure type that has as a generic part a whole place name that is distinguished from other, similar place names by a specifying modifier, such as South Saami (N) *Ohtje| Sudtsjaevrie*, ‘Small Ice-Free Lake’ and *Stoere| Sudtsjaevrie*, ‘Big Ice-Free Lake’ or Aanaar Saami *Irjánâšrohe| Lyemekaavâ*, ‘The Late Irjánâš’s Cloudberry Bay’.

As can be seen from these examples, some of these names have an attributive adjective as a specific part, but the number of such names varies from one language to another. In Ruvhten sïjte, all the place names belonging to this type have an attributive adjective as their specific part, in Vualtjere all

but one name, and in Giron 96 percent of such names. But in Dálvadas, Čovčjävri–Kosseennâm and Sverloff family area, only approximately half of the specifying modifiers are attributive adjectives. This makes the differences between Giron’s and Dálvadas’s place name systems even more evident: the rules that specify what kind of lexemes can be used as a specifying modifier are important in this context. There are, however, also differences between South Saami materials and Giron, since comparative and superlative forms of adjectives are not attested in the South Saami materials but are quite common in Giron’s material. It seems that place names that include adjectives form several structure-type categories, which differ from one Saami language to another. This topic should be studied further.



Map 5. Specifying modifier as a specific part.

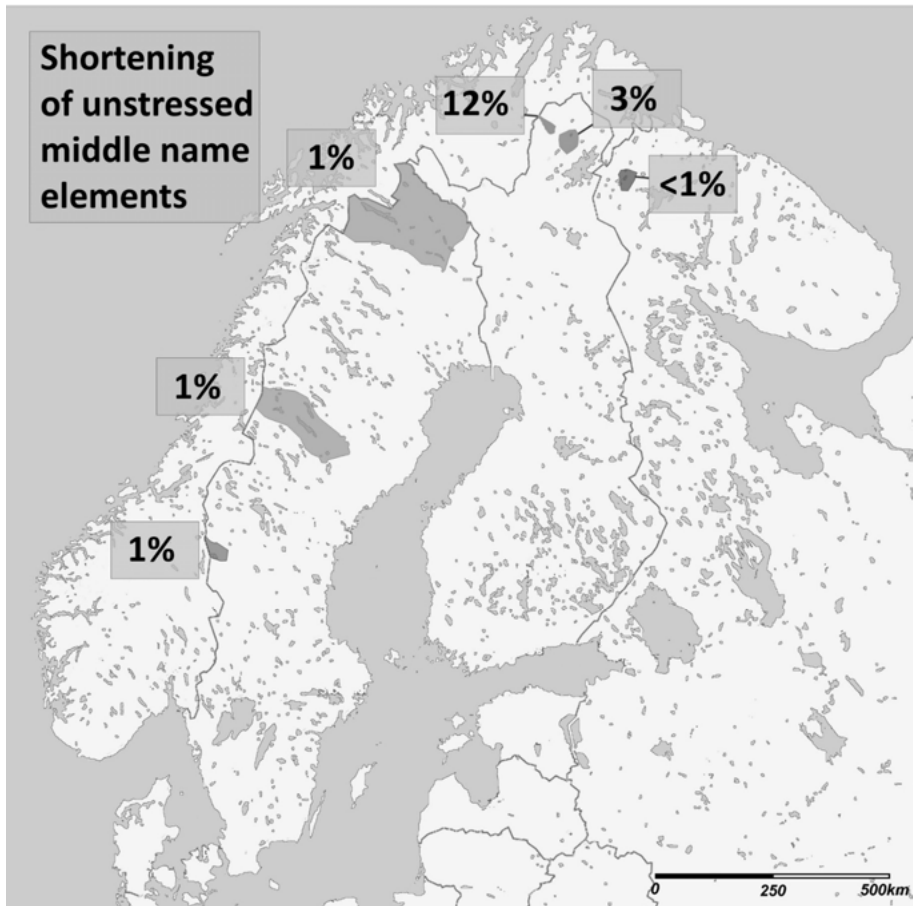
4.4 Shortening of unstressed middle name elements (reduction)

There are in each of the studied languages morphophonological shortening processes that also concern place names. These processes are typically manifested in the unstressed middle name elements of place names with three or more name elements. In North Saami (at least western and eastern inland and sea dialects), the reduction process is systematic, though somewhat irregular, and can be attested also in compounds other than place names, especially often in the eastern inland dialect (for a full description of the process see, e.g., Aikio, A. 2007, 173–174; Aikio, S. 2017, 14–15; Helander 1991, 82; Sammallahti 2019, 219–220; Valtonen 2014, 254–256). Some examples from Dálvadas are *Beahcelljohka* < *Beahcelahjohka* < **Beahceleagijohka*, ‘Pine River Valley’s River’ and *Njiljohmoh|várri* < **Njiljogamohki|várri* ‘Njil River’s Curve’s Mountain’.

The typicality can be clearly attested also in the results of the present study: up to 12 percent of place names of Dálvadas have this type of shortening. In other studied languages, the process is clearly less common and can be attested regularly only in my Aanaar Saami material (3%), e.g., *Hiävušvär|luobâl* < *Hiävušvääri|luobâl*, ‘Horse Mountain’s Lake’. It is, however, good to keep in mind that the Čovčjävri and Kosseennâm areas belong to the northern dialect, which has adopted many features from nearby North Saami dialects. How typical and systematical this phenomenon is, should be tested with material from the eastern dialect. The phenomenon is almost nonexistent in my Skolt Saami material, probably mainly due to the linguistic processes. As a result of these, the second syllable vowels have been shortened to extra-short, and the historically disyllabic stems have become monosyllabic, causing the shift of the syllable boundary as a rule.

However, the materials from Giron, Vuoltjere and Ruvhten sijte also include a very low amount of shortened place names (1% each). The low amount is not a big surprise in the South Saami materials, since South Saami has in general preserved the historically long forms and end-syllables. The clearest examples that can be found are of type *Viglenjuen|baahka* < *Viglenjuenien|baahka*, ‘Vigle Mountain’s Slope’ (in Ruvhten sijte) and attested only in archive records. On maps, only such variants as *Baeltehk|jaevrie* < **Baelhtehke(n)|jaevrie*, ‘Cliffy(‘s) Lake’ can be seen. On the other hand, the small number of such cases in Giron is very surprising, since reduction of unstressed middle name elements is often presented as a common North Saami phenomenon (see, e.g., Aikio, A. 2007, 173–174; Aikio, S. 2017, 14–15; Helander 1991, 82; Sammallahti 2019, 219–220; Valtonen 2014, 254–256). The phenomenon is present in the Giron material, and these cases are consistent with the morphophonology of similar cases in

Dálvadas material, but the number is very low. In this case, it seems that a clear difference in the place name grammar is found inside North Saami. (See Map 6.)



Map 6. Shortening of unstressed middle name elements.

3.5 Number of name elements

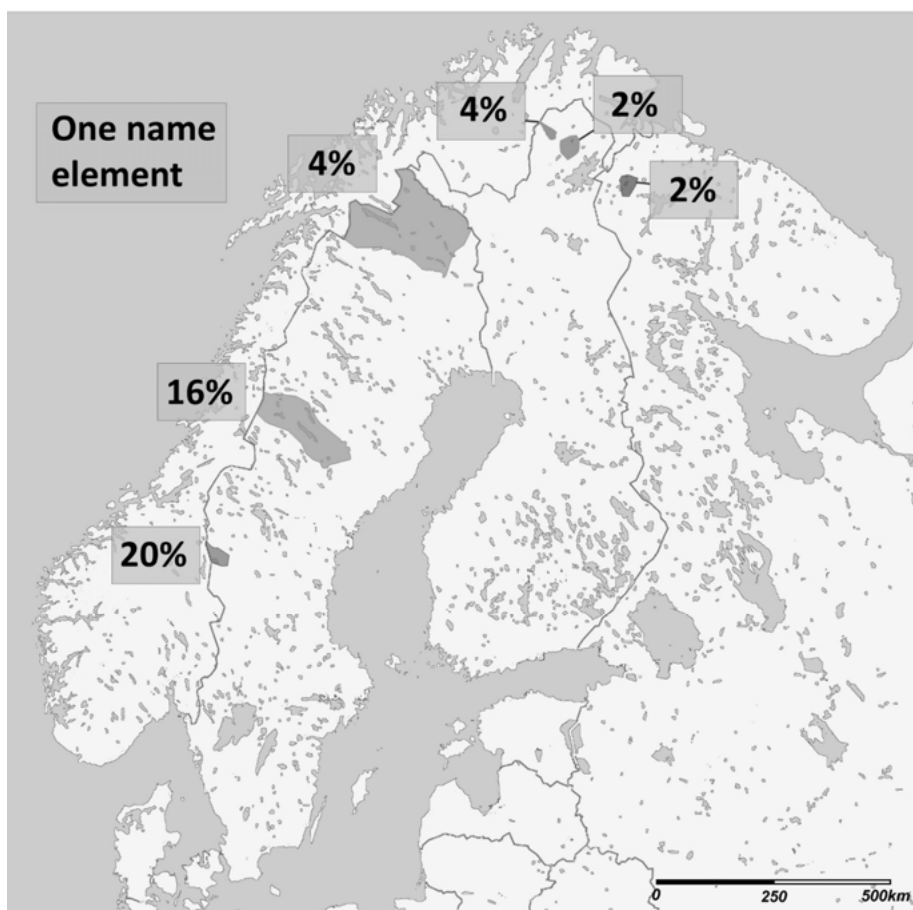
How many name elements there can be in a place name is one of the structural features, which is guided by place name grammar as much as the above-mentioned choices of specific parts or shortening processes. The shortest place names in my research material comprise a single name element, i.e., of one stem. Into this group I have also counted combinations of stem and derivational suffix. They are, however, very rare in other materials except in Vualtjere, where the number is a bit higher than in other materials due to commonness of place names belonging to the *-Vre*-reduction construction

type, e.g., *Gierkere* < *Gierkie|vaerie*, ‘Stone Mountain’ and *Saaljere* < *Saalje|jaevrie*, ‘Goat Willow Lake’ (for detailed description, see Valtonen 2014, 208, and sources mentioned there).

As can be seen in Map 7, South Saami seems to differ significantly from other Saami languages with 20 and 16 percent of place names with one name element. In addition, in the thoroughly studied material of Ruvhten sįjte, 13 percent of the names belong to a unique South Saami structure type that I have referred to in Valtonen (2014) as freely varying single- or two-part names and that have either one or two syntactic name parts, such as *Bavla* ~ *Bavlan|gāetieh*, ‘Hollow ~ Hollow’s Dwellings’ in Ruvhten sįjte. In everyday speech, these names are often used as a single-part variant, but the two-part variant is thought to be the complete form. Because the “complete” forms are most often chosen for maps, this phenomenon cannot be attested in my material from Vualtjere, but it is attested in place name materials in all South Saami areas (see Valtonen 2014, 210–212, for a full description of this type and Valtonen 2014, 208–209, for similar but rare processes in North Saami).

The more northern materials seem to be divided into two areas: the Giron (4%) and Dálvadas (4%) vs. the Čovčjävri–Kosseennâm (2%) and Sverloff family area (2%). However, the difference is not as great as compared to South Saami. It is interesting that the smallest amounts are in the east, since single-part (one name element) place names, especially stem + suffix constructions, are common in the Russian place names of Kola Peninsula and Murmansk Oblast, e.g., *Лопарская* (*Loparskaya*) ← *лопар*, ‘a Saami (person)’ + possessive/adjective suffix -ск- + feminine ending -ая (see also Kert 2005, 40; Senkevich-Gudkova 1963, 27–28). This seems to indicate that at least the Eastern Saami languages belonging to the mainland group (see Sammallahti 1998, 26–31) have not had intense influence from the Russian language.⁹ According to my preliminary observations based on a place name sample of some hundred lexemes (Itkonen 1958 and the map of Aarsjogk sįjtt [Varzino] published by Sámiid Vuorká-Dávvirat in 2019; see also Kert 2002, 127), the situation in Kildin Saami seems to be the same as in the mainland group.

⁹ I have also gone through the place names belonging to the northern dialects of the Skolt Saami published by Itkonen (1958) and Tanner (1928), and they do not differ significantly from the place names of the southern dialects. Since I have not made similar detailed calculations for the materials, I cannot give figures for them. Akkala Saami place names are very poorly known, and name collections are not readily available. The few place names presented by Senkevich-Gudkova (1963) resemble the place names of Skolt Saami.



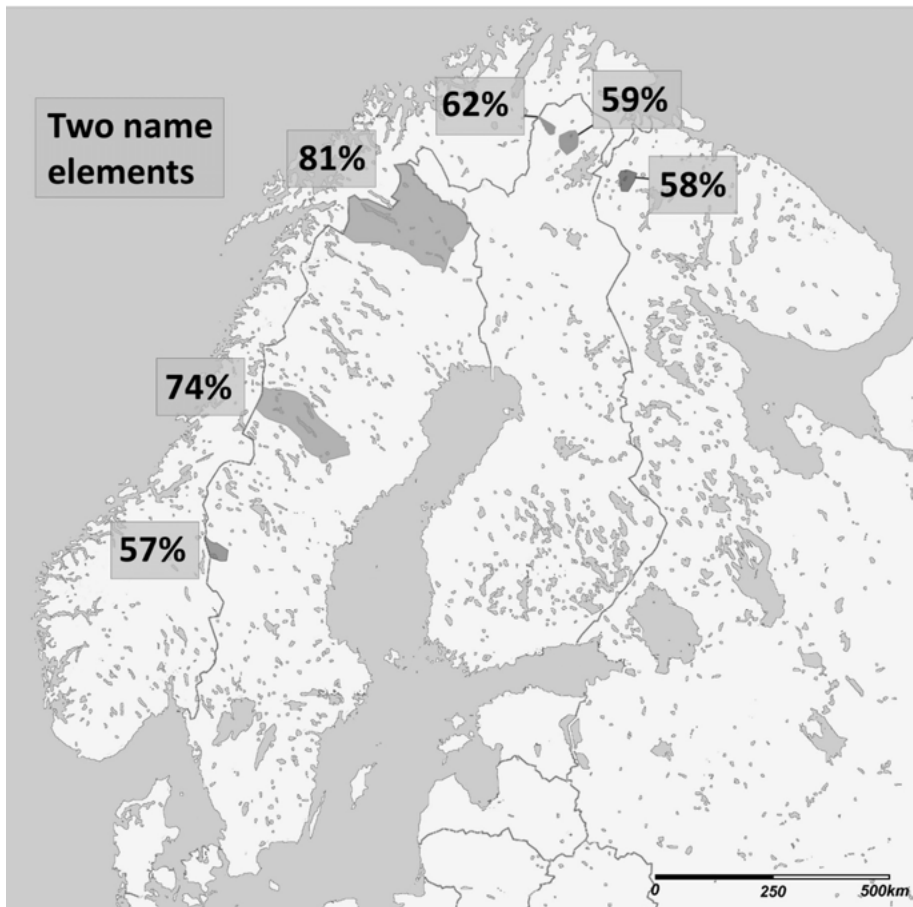
Map 7. Place names with one name element.

There are two name elements in most place names in all Saami languages. In most cases, this means that there is one stem as a specific part and one stem as a generic part. However, there are some areal differences. The results of Dálvadas, Čovčjävri–Kosseennâm and Sverloff family area are very similar: 62, 59 and 58 percent, respectively, but in Giron the situation is different: 81 percent of the names have two name elements. The results are almost equally high in Vuoltjere (74%), but it is likely that a significant part of these names belong to the group of freely varying single- or two-part names. In Ruvhten sija, the result (57%) seems to follow the pattern of the northernmost area, but if the freely varying single- or two-part names (13%), as well as the few names (2%) that vary between two or three name elements, were added, the result would be 72 percent. Due to differences in the nature of the studied materials, the idea of a comparable situation in the South Saami area is, however, speculative only. (See Map 8.)

Because the materials from languages and areas between South Saami and North Saami Torne dialect are not included in this analysis, it also remains open whether the Giron result represents an independent innovation area or is connected to the South Saami results. The idea of an independent innovation based on linguistic contacts is supported by the language situation: in Giron there have been speakers of Meänkieli at least since the 17th century, and the languages and their speakers have been interacting in many ways for centuries. This includes place names that most often have been borrowed from North or Lule Saami to Meänkieli (e.g., Me. *Vakkojärvi* < SaN. *Váhkujávri*), but there are also place names borrowed from Meänkieli to Saami (e.g., SaN. *Murhávárri* < Me. *Murhavaara*) and reverse loans (e.g., SaN. *Alajávri* < Me. *Alajärvi* < SaN. *Vuollijávri*;¹⁰ see, e.g., Swedell 2008; 2009, 28–31).¹¹ According to results from my former study (Valtonen 2014, 266–270), the Finnish place names are on average one name element shorter than the place names of North Saami (eastern inland dialect), Aanaar Saami and Skolt Saami (see also Kiviniemi 1990, 91). The place names with three or more name elements are clearly rarer in place names of Giron than in place names of Dálvadas, Čovčjávri–Kosseennâm and Sverloff family area.

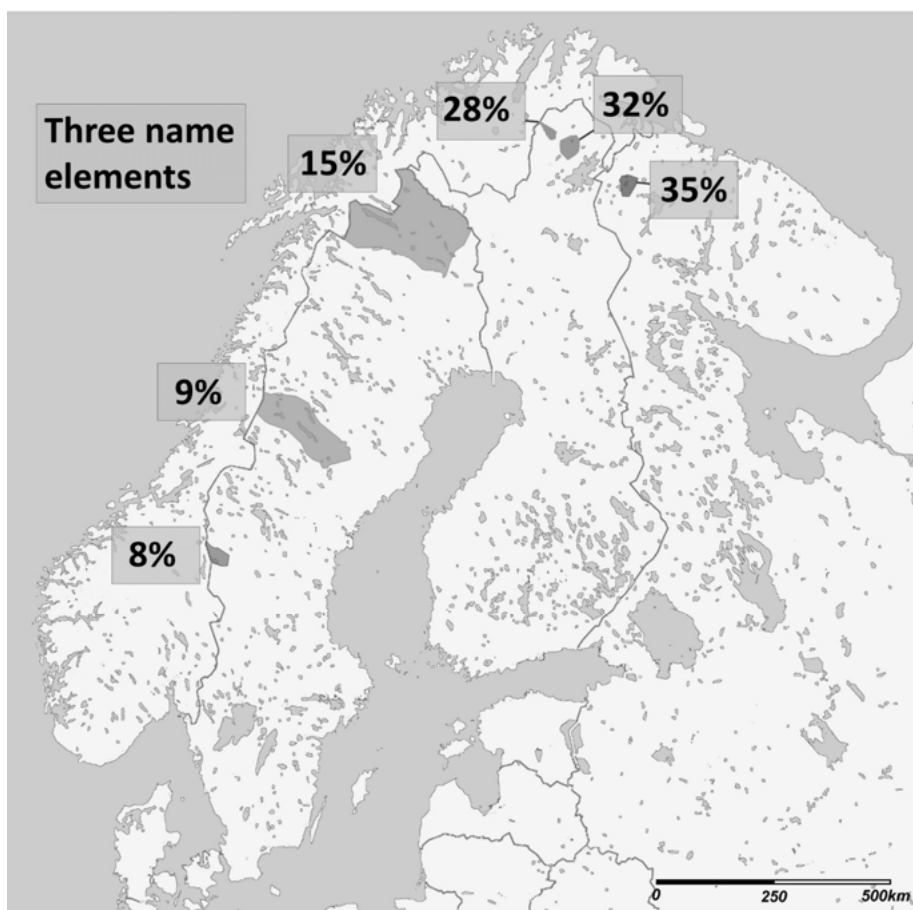
¹⁰ These place name examples are taken from the digital version of the place name archive Namnarkivet i Uppsala administered by Institutet för språk och folkminnen (Isuf), see <https://ortnamnsregistret.isof.se/place-names>.

¹¹ In her autobiographical book *Nådevalpar* (1971), Saami writer Sara Ranta-Rönnlund, born in Giron in 1903, describes well the trilingual way of life in the municipality and especially the intertwined lives of the Saami-speaking reindeer herders and Meänkieli-speaking peasants. Her book includes several passages in which multilingual place name practices are included.



Map 8. Place names with two name elements.

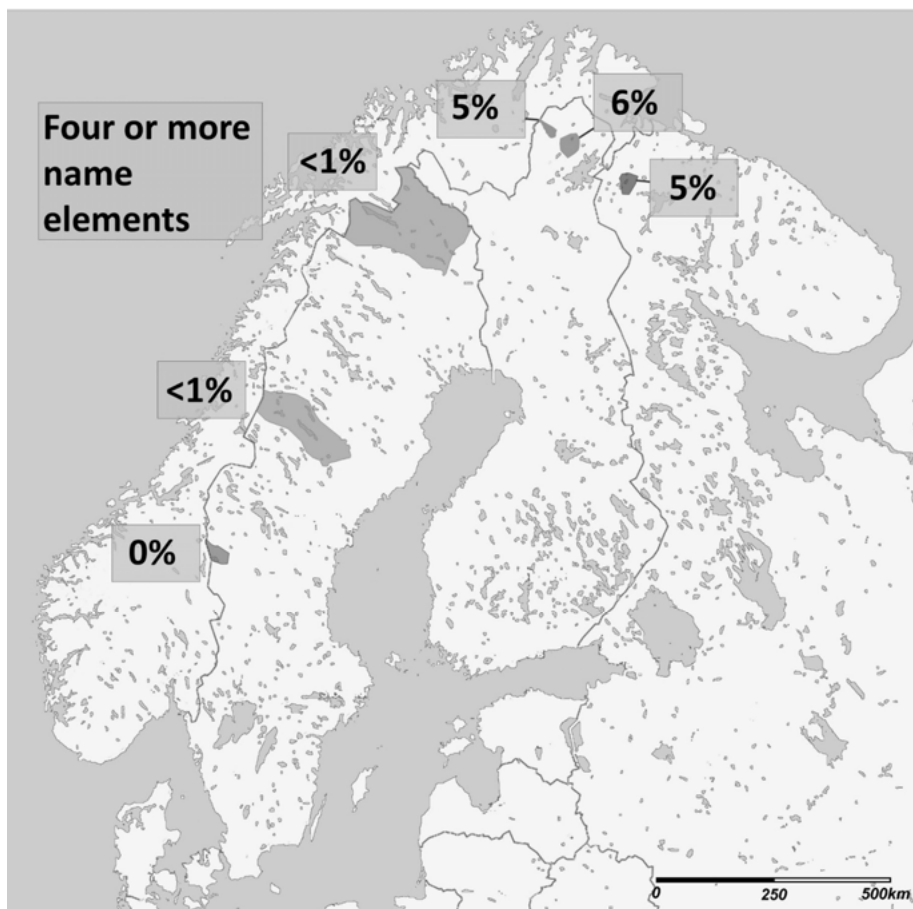
Place names with three name elements are a common feature in my place name samples of eastern inland North Saami, Aanaar Saami and Skolt Saami, since approximately a third of the place names have three name elements. Giron shows a clear difference with a result of only 15 percent. The South Saami materials show even lower numbers: 9 percent in Vuoltjere and 8 percent in Ruvhten sijte. (See Map 9.)



Map 9. Place names with three name elements.

When it comes to the place names that have four or more name elements, the place names materials of Dálvadas, Čovčjävri–Kosseennâm and Sverloff family area show a clear contrast with the Giron, Vualtjere and Ruvhten sijte materials. In the more eastern languages, 5 or 6 percent of the names have four or more name elements, whereas in other languages, such names are very rare or nonexistent. (See Map 10.) The longest place name in my material is a six-stem Skolt Saami place name from Sverloff family area: *Hoattjääuraluutvuäjijnjääl'm|jeä'gğ*, 'Useless Lake's Bay's Brook Mouth's Bog'. It is also noteworthy that the Finnish place names of eastern Finnish Lapland that have a clear Kemi Saami substrate are typically longer than Finnish place names in other parts of the country. This gives a hint that the Kemi Saami areas have belonged to the northern and eastern area where long names have been a typical phenomenon. On the other hand, it seems that based

on the before-mentioned sources, the Kildin Saami place names are not as often as long as place names of the more western Eastern Saami languages.



5. Discussion

To compare the studied place name materials, I have calculated a relative equality value for each region and for each linguistic phenomenon. This means that the area with the highest percentage of occurrence of each studied linguistic phenomenon is taken as a point of comparison and gets a value of 100. Other areas get a relative equality value between 0 and 99 according to the number of occurrences. The higher the value, the more that phenomenon occurs in that material. I have further divided these relative equality values into six categories: 0; 1–19; 20–39; 40–59; 60–79; and 80–100.

Table 1. The number on the upper line next to each studied linguistic phenomenon measures occurrence as a percentage of the studied place name material, and the number on the lower line is the relative equality value. The color of the cells describes the categorization of the relative equality values, the darkest being the highest and the lightest the lowest (see also Map 11).

Phenomenon/ Area	Ruvhte n sįjte	Vualtjer e	Giro n	Dįlvada s	Čovčjįvri –Koss- eennįm	Sverlof f family area
Personal name as specific part	0%	<1%	2%	7%	6%	3%
	0	<14	29	100	86	43
Action nominal as a specific part	0%	<1%	2%	5%	5%	2%
	0	<20	40	100	100	40
Attributive adjective as a specific part	12%	26%	18%	8%	10%	12%
	46	100	69	31	38	46
Specifying modifier as a specific part	1%	14%	9%	8%	8%	6%
	7	100	64	57	57	41
Shortening of unstressed middle name elements (reduction)	1%	1%	1%	12%	3%	<1%
	8	8	8	100	25	<8
One name element	20%	16%	4%	4%	2%	2%
	100	80	20	20	10	10
Two name elements	57%	74%	81%	62%	59%	58%
	70	91	100	77	73	72
Three name elements	8%	9%	15%	28%	32%	35%
	23	26	43	80	91	100
Four or more name elements	0%	<1%	<1%	5%	6%	5%
	0	<17	<17	83	100	83

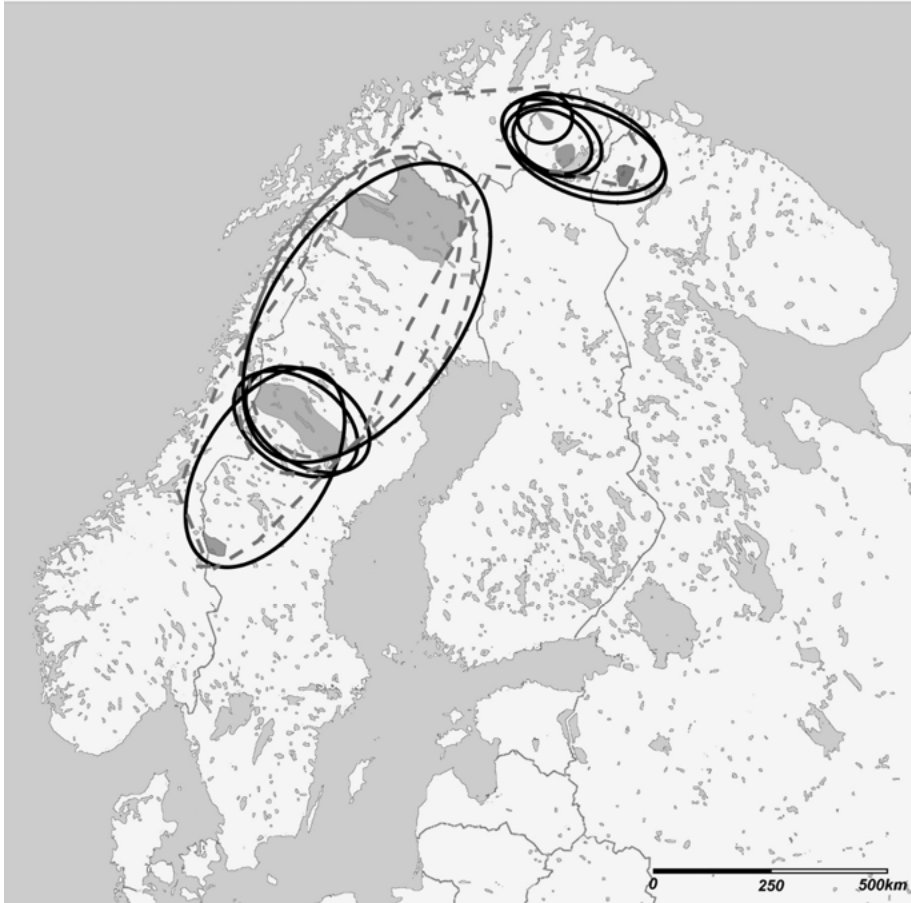
I have summarized the percentage and relative equality values of each material, and each studied linguistic phenomenon in Table 1 above. In the table, the six categories are distinguished by different shades of gray, the darkest being the highest and the lightest the lowest.

The highest (and sometimes the lowest) relative equality values can be, in my opinion, interpreted to represent an innovation center (or a borrowing area) of a linguistic phenomenon. These innovation centers (areas with relative equality values between 80 and 100) are marked on Map 11 with boundaries drawn with solid black lines. The innovation areas together with the areas where the innovation seems to be diffusing (areas with relative equality values between 60 and 100) are marked with a dashed gray line. Map 11 with its marked areas resembles an isogloss map, but the lines must not be interpreted as typical isoglosses that represent the boundary between existence and nonexistence of a certain linguistic phenomenon. However, large differences in values of neighboring materials can be interpreted as indicating (at least gradual) differences in the prototypical place name schemas represented as differences in place name grammars. At the same time, it is worth remembering that these results are partly based on quite small numbers of place names and unsystematically selected structural features, and because of this, the statistical results are not representative but rather indicative.¹² However, the main objective of this article, to show how place names can be used to represent areal variation of Saami languages, is fulfilled.

Despite the poor statistical representativeness, I want to reflect on some of the results. In Map 11, the only clearly common structural feature is that place names with two name elements are common in all studied Saami languages. The place names of the South Saami area, especially in Vuoltjere, seem to have several structural features that are typical for them. Attributive adjectives and specifying modifiers as specific parts are clearly more typical in Vuoltjere's place name system than in other studied materials. Place names with only one name element are most typical in Ruvhten sįjte's place name material, but very common also in Vuoltjere. Vuoltjere's place name system shares some typical structural features with Giron's material, but these are not shared with Ruvhten sįjte's material. As Ruvhten sįjte's material is very small in number compared to other studied materials, it is plausible to think that a more representative material would produce a more similar result than in Vuoltjere, but there could certainly be some differences as well. It would be interesting to compare the South Saami materials with Ume Saami place name material, since based on language historical morphophonological evidence,

¹² Compare, for example, *Atlas Linguarum Europae*'s material, which aimed to capture the list of 549 stems in 34 different Saami dialects (see Rydving 2013, 93–107).

these languages have been thought to belong to the same subgroup of Saami languages (see, e.g., Korhonen 1981, 19; Sammallahti 1998, 22)— earlier, even being dialects of the same language (see, e.g., Rydving 2013, 36, 38–41).



Map 11. The innovation centers (areas with relative equality values between 80 and 100; see Table 1) are marked with solid black lines, and the innovation areas and the areas where the innovation seems to be diffusing or is otherwise more typical (areas with relative equality values between 60 and 100; see Table 1.) are marked with a dashed gray line.

The most distinctive difference on Map 11 is shown as a gap between the place name materials of the studied North Saami dialects: Giron’s place name system seems to be more closely related to the South Saami systems and Dálvadas’s place name system with the systems of the studied Eastern Saami languages. Giron’s place name system shares with both South Saami place name systems two structural features: the low number of personal names as

specific parts and the rarity of place names with more than three name elements. As both types are very common in Dálvadas's material, the difference is striking. Giron's material also shares with Vualtjere's material the high number of attributive adjectives and specifying modifiers as specific parts, even though the number is clearly higher in Vualtjere. The difference with Dálvadas's material in the number of attributive adjectives as specific part is high. The number of place names with two name elements is highest in Giron, but they are very common in Vualtjere as well. This feature separates these two materials from others, although the difference is not radical. The reduction (shortening of unstressed middle name elements) is rare in Giron, even though it is very common in Dálvadas.

The division between the Torne Saami dialect and the inland dialects of North Saami has not been highlighted in language historical studies, but as Rydving (2013, 187) notes, Torne Saami is understudied and poorly documented. It is also worth noting that my materials do not include any place name materials of the western inland dialect, and because of this, it is impossible to know if these assumed differences are between Torne Saami and the western inland dialect or between western and eastern inland dialects. There are, however, at least three reasons that can explain the differences between Giron's and Dálvadas's materials. First, it might relate to the long common history of Saami and Meänkieli in Giron, which I have discussed above. Second, Giron's place name system may share old common features with Lule Saami name systems, as well as some substrate influences. The existence of a Lule Saami substrate in Giron can be attested on the lexical level in some loaned (opaque) appellative name elements (e.g., *moarhmmá* < SaLu *moarmes* : *moarmmá*-, '(reindeer) fetus; May') and terrain appellatives (e.g., SaN southern Torne dialect *čavil*, 'mountain ridge' < SaLu *tjávelk*). These are more common in the municipality's southwestern border area. The second hypothesis could be tested by analyzing other Torne Saami place name materials, especially material from the Suomanjårga/Käsivarsi region in Finland that has no connections with the Lule Saami language. It would be important to analyze also place name materials of the Lule Saami language.

The third reason that might explain the differences between Giron's and Dálvadas's materials is that Dálvadas's material seems to share several features with more eastern place name materials. Personal names and action nominals as specific parts are most typical in Dálvadas's and Čovčjävri–Kosseennâm's place name systems. Place names with three and four or more name elements are most typical in Dálvadas's, Čovčjävri–Kosseennâm's, and Sverloff family area's place name systems. On the other hand, only

Dálvadas's place name material includes lots of reduction, but it is also known to be typical in the western inland dialect of North Saami.

It is interesting to compare my findings with the results that Håkan Rydving (2013) got when he studied the lexicon of Saami languages based on 34 samples collected during the project *Atlas Linguarum Europae* (ALE). His results show that the South Saami dialect of Gåebrie has the highest lexical correspondence to the other South Saami materials (Rydving 2013, 140, 175–176). This result is consistent with my findings that the South Saami forms an area of its own that also shares common place name systems. The close connection between Aanaar Saami and North Saami of Ohcejohka, as well as the connection between Aanaar Saami and the Skolt Saami dialect of Njeä'llem/Nellim¹³ in Aanaar/Inari, is also recognized by Rydving (2013, 161–166, 177).

However, in Rydving's results the lexical correspondence of the Torne Saami dialect of Gárasavvon is as high to the materials representing the eastern and the western inland dialects of North Saami. It has the highest correspondence, as can be expected, to the Torne Saami dialect of Čohkkiras. Even the correspondence to the Lule Saami material of Jåhkåmåhkke is almost as high as to the North Saami inland dialects. (Rydving 2013, 151–154, 176.) The area with the highest lexical correspondences is almost the same as the area where the North Saami of Guovdageaidnu and Gárasavvon were forcibly relocated during the end of the 19th and the beginning of the 20th centuries (Rydving 2013, 187–188). It is probable that this fast and radical historical process is reflected in the lexical correspondences that Rydving studied, but it might not have had similar effect on place names due to their more conservative nature.

Rydving also writes about the betweenness of the Aanaar Saami language in relation to the Eastern-Western Saami division. He suggests that it could be seen as an independent transition language that cannot be classified in either category. This idea is supported by the complex morphophonology in nominal and verbal inflection and derivation that seems to have gained its complexity mainly during the separate development of Aanaar Saami (see, e.g., Valtonen et al. 2022). If one must choose, then Rydving would place Aanaar Saami with the Western Saami, based on lexical evidence. This choice is supported by the historical data. The Aanaar Saami and Ohcejohka Saami traded their goods and fished regularly with the Sea Saami in the Várjavuonna/Varangerfjorden region by the Arctic Ocean, where they also had connections with the speakers of the northern Skolt Saami dialects, including the communities that now are

¹³ The Skolt Saami of Njeä'llem moved to the area after the second World War from their traditional territories situated by the Arctic Ocean.

living in Njeä'llem. For centuries, the Aanaar Saami have also moved permanently to Várjahuonna when there has been a shortage of resources in Aanaar. (e.g., Nahkiaisoja 2003, 174, 178–179, 183; Valtonen 2014, 164–165.) It is obvious that these connections have been very important in transmitting linguistic innovations but also in maintaining old connections.

However, there is also a third possibility: that the border between Western and Eastern Saami languages, nowadays most often situated between North and Aanaar Saami, is not as fundamental and old as present research maintains. This view has been presented previously by Mikko Korhonen (Korhonen 1981, 21; see also Bergsland 1995, 13). There are several good morphophonological arguments to suggest that one, at the present less well recognized, linguistic border has passed between western and eastern inland dialects of North Saami.¹⁴ It can be argued that the present border between North and Aanaar Saami is a result of eastward migration from West Finnmark caused by economical, institutional, and political changes that started in the 16th century (see, e.g., Aikio, S. 2013). Migrating populations spread new lexicons and morphophonological innovations, but the older linguistic structures remained as a substratum.

6. Conclusions

At the epilogue of his investigation *Words and Varieties*, Håkan Rydving wishes that his study “will at the same time initiate an intensified discussion about Saami linguistic geography, its methods, criteria, material and theoretical perspectives [... and] contribute to the evaluation of different criteria, be they [...] language historical, political or communicative” (Rydving 2013, 188). I agree with Rydving’s wish, because more research and

¹⁴ There are several morphophonological differences that support the idea that the border between Eastern and Western Saami languages may have moved further east. East of North Saami western inland dialect, for example: 1. The stressed single vowels have become long vowels before short and relatively short consonants (e.g., North Saami eastern inland dialect: /mâannah : mâanan/ and Aanaar Saami: moonnâd : moonâm vs. North Saami western inland dialect: /mannah : manan/ ('to go' INF : SGLPRES); 2. Single intervocalic stops /k/ and /p/ have changed after stressed syllables to spirant *v* ~ *g* (~ Ø) (e.g., North Saami eastern inland dialect: /soahkii : soagii ~ soa.ii; suuhpii : suuvii/ and Aanaar Saami: suâhi : suâvi; supe : suve vs. North Saami western inland dialect: /soahkii : soakii; suhpii : supii/ ('birch' and 'aspen' NOM : GEN-ACC); 3. Cases and other grammatical features are often (but not always) marked also by modifications to the root (also other than consonant gradation) and not just with suffixes (e.g., North Saami eastern inland dialect: /meähcii : miehcii : meähcäij/, Aanaar Saami: mecci : meeci : miäcán, and Skolt Saami: meä'cc : mie'cc : meäcca vs. North Saami western inland dialect: /meahccii : meahcii : meahccaaj/ ('forest; area without permanent settlement' NOM : GEN-ACC : ILL). In addition to these, there are the well-known features of the sea dialect that agree with the Eastern Saami languages. (See Korhonen 1981, 19–22; Sammallahti 1998, 11–14.)

new openings are needed to question the present, partly unsatisfying conclusions. In this process, extensive systematic analysis of the structure types of place names of all Saami languages and major dialects can provide one additional independent perspective, as I have demonstrated in this article.

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