



MASTERARBEIT / MASTER'S THESIS

Titel der Masterarbeit / Title of the Master's Thesis

An analysis of the arguments for and against a common Proto
Finno-Saami language

verfasst von / submitted by

Sylvi Lindström, BA

angestrebter akademischer Grad / in partial fulfilment of the requirements for the degree of

Master of Arts (MA)

Wien, 2021 / Vienna 2021

Studienkennzahl lt. Studienblatt /
degree programme code as it appears on
the student record sheet:

UA 066 854

Studienrichtung lt. Studienblatt /
degree programme as it appears on
the student record sheet:

Masterstudium Finno-Ugristik

Betreut von / Supervisor:

Univ.-Prof. Dr. Johanna Laakso

Abstract

Die vorliegende Arbeit behandelt die rekonstruierbare finno-saamische Ursprache. Aus historischer Sicht kann diese Sprache als die letzte gemeinsame Sprache der heutigen ostseefinnischen und der Saamischen Sprachen betrachtet werden. Eine Ursprache wird durch die vergleichende Methode, die an der Tochtersprachen angewendet wird, rekonstruiert. Deshalb wird eine Ursprache hypothetisch betrachtet. Aus diesem Grund lautet die Forschungsfrage: Was sind die Argumente für und gegen diese gemeinsame finno-saamische Ursprache? Um die Forschungsfrage zu beantworten, ist eine Analyse der Argumenten durchgeführt worden, die sich an spezifischen Gemeinsamkeiten zwischen Ostseefinnisch und Saamisch orientieren. Die Argumente sind von phonologischer, morphologischer, syntaktischer, lexikalischer und interdisziplinärer Art. Durch die Analyse bin ich zur Schlussfolgerung gekommen, dass es genug Argumente für die finno-saamische Ursprache gibt, aber es davon abhängt, welche Beweiskraft man den verschiedenen Argumenten zuweist.

Table of contents

Abstract.....	3
Table of contents.....	4
Abbreviations	6
I.Introduction	7
II. The Finno-Saamic relation.....	10
2.1 Finnic and Saami languages	10
2.2 Early research	12
2.3 Proto Finno-Saami	23
2.3.1 The vowel system.....	24
2.3.2 The consonant system	27
2.3.4 Morphological structure	30
2.3.5 Syntax.....	31
2.3.6 The case system.....	32
2.3.7 Innovations.....	32
III. Phonological arguments	34
3.1 The consonant gradation	34
3.1.1 A Proto-Uralic origin?	36
3.1.2 Germanic influence	40
3.1.3 Proto Finno-Saamic heritage.....	43
3.1.4 Saami-Samoyedic connection	46
3.2 Labial vowel in non-initial syllable	47
3.2.1 An innovation?	47
3.3 The loss of initial *v before a rounded vowel	51
IV. Morphological arguments	53

4.1 The comparative marker	53
4.2 The imperative marker	55
4.3 The conditional and potential marker	56
4.4 The infinitive marker	61
V. Syntactic arguments	63
5.1 Agreement	63
5.2 Word order	65
5.3 Copula	65
5.4 Conjunctions	66
5.5 Any common syntactic innovations?	66
VI. Lexical arguments	69
6.1 Specific Finno-Saamic vocabulary?	69
6.1.1 Difficulties of common lexicon	81
6.2 Loanwords	83
VII. Interdisciplinary arguments	87
7.1 The homeland of Proto Finno-Saami	87
7.1.1 Older research	87
7.1.2 Current view	93
VIII. Conclusion	98
Resources	101
Internet resources	105

Abbreviations

BC = Before Christ	Selk = Selkup
CG = Consonant gradation	P = Partitive
ESS = Essive	PFU = Proto Finno-Ugric
Est = Estonian	PFM = Proto Finno-Mordvin
Fi = Finnish	PFS = Proto Finno-Saami(c)
G = Genitive	PG = Proto Germanic
Hu = Hungarian	PIE = Proto Indo-European
ILL = Illative	PL = Plural
Ko = Komi	PU = Proto Uralic
Liv = Livonian	SaaI = Inari Saami
LPF = Late Proto-Finnic	SaaN = North Saami
LpN = North Saami	SaaS = South Saami
M = Mari	SG = Singular
Mord = Mordvinic	VL = Verner's Law
MPF = Middle Proto-Finnic	Ms = Mansi
N = Nominative	

I. Introduction

This master thesis concerns the Proto-Finno-Saami language, the reconstructable ancestor language of the contemporary Finnic and Saami languages.

The Finnic and Saami languages are today not only geographical neighbors, as their relationship can also be described in a genetic sense concerning the framework of Uralic taxonomy. Thus, both language groups are descendants of their common Proto-Uralic language. However, more precisely, they are closely related to each other to such an extent that they would constitute a separate Finno-Saami subgrouping. This grouping would derive from an intermediate Proto-Finno-Saami language spoken approximately 3,000 years ago during a relatively short period of time. After the split of this common language, Finnic and Saami developed into independent languages and later language groups that are no longer mutually intelligible.

In earlier research, the linguistic affinity has often been confused with the Saami ethnic question. While the relatedness of the Finnic and the Saami languages was apparent, the physical-anthropological differences between the groups made it difficult to believe in a genetic relatedness between them. As a consequence, a hypothesis of language shift has arisen (Scheffer 1673, Wiklund, 1986).

Based on later research, the view of the Finnic and Saami languages having a common ancestor has been more or less accepted among some scholars (Ravila 1953/1957, Sammallahti 1998/1999, Korhonen 1981/1998, E. Itkonen 1955/1961), and the Finno-Saamic unity was taxonomically grouped together as one branch. This view was based on the influence of Paavo Ravila, who in *Die Stellung des Lappischen innerhalb der finnisch-ugrischen Sprachfamilie* (1935) advocated the theory that Saami, together with Finnic, descended from a common language.

The term “more or less” must be used when mentioning Proto-Finno-Saami since it is still a debated topic, even in the light of contemporary research. It has been said, for instance, “The question whether Finno-Saamic is a valid genetic subgroup remains so far unsolved, and perhaps insoluble” (Aikio, 2012:69). Additionally, the taxonomy of the Uralic languages and the hierarchy of genetic relationships between their daughter languages seem to cause major disagreement.

In a more contemporary research, it is assumed that the Proto-Uralic language split into three dialects: the Western, Southern and Eastern dialect. From these, the Western Proto-Uralic dialect corresponds to a unity from which Saami, Finnic and Volgaic would have later developed. These modern classifications are concluded on various methods and data, such as lexicostatistics, and therefore they do not account for systematic or convincing evidence (Zhivlov 2018, Aikio 2019). A traditional scheme, a binary branching tree, is on the other hand among other evidence based mostly on sound correspondences and Finnic and Saami are grouped together.

Therefore, the purpose of my master’s thesis is to analyze and bring together all of the suggested arguments either supporting or denying a common proto-language of Finnic and Saami. From all of the resources cited throughout, I have used as my primary resources *Johdatus Lapin kielen historiaan* (1981) by Mikko Korhonen, *The Saami Languages: An Introduction* by Pekka Sammallahti (1998) and some chapters from *The Uralic Languages: Description, History and Foreign Influences* by Denis Sinor (1988). Some sections in the thesis require examples from various Uralic languages. Concerning North Saami in particular, it must be mentioned that some examples, which mostly come from older sources, are written according to Konrad Nielsen’s orthography, while the newest sources use the current standard orthography.

My hope is that this thesis will contribute to the research concerning the close relationship between Finnic and Saami. The first part of the thesis is dedicated to a general over-

view of the Finno-Saamic relation. In this context, the Finnic as well as Saami languages are presented; subsequently, the history of research is discussed and, afterward, the reconstructed Proto-Finno-Saami language, together with its innovations, is presented. The following five chapters present different types of arguments that are categorized by their linguistic branches, such as phonological, morphological, syntactic and lexical arguments. However, the arguments in the seventh chapter can be characterized as interdisciplinary, since they come from the field of archaeology.

II. The Finno-Saamic relation

This chapter can be characterized as the theoretical part of the thesis. The objective is to provide a clear picture of the background concerning the Finno-Saamic affinity. Therefore, this chapter is divided into three parts, and each part treats the topic from a different point of view.

The first part provides an overview of the contemporary Finnic and Saami languages. The next part is dedicated to the history of research on the Finno-Saamic affinity, which has been primarily drawn from *Finnisch-Ugrische Sprachforschung* by G. J. Stiper (1990) and *Finno-Ugrian Language Studies in Finland 1818 - 1918* by M. Korhonen (1986) and is presented chronologically. The third part focuses on the core of the historical relationship between these two language groups, the once possibly spoken Proto-Finno-Saamic language.

2.1 Finnic and Saami languages

This section consists of a brief introduction of the Finnic and Saami languages in which basic information will be provided.

The contemporary Finnic and Saami languages are the westernmost branches of the Uralic language family¹. In various, mostly older studies, these language groups are also identified with the terms “Fennic” and “Balto-Finnic” and “Lappic,” “Samic” and “Sámi.” The terms “Lapp” and “Lappic” are old exonyms associated with the geographical term for Lapland, and they can be found in older literature. However, today, they

¹ In addition to „Uralic“ language family, the term „Finno-Ugric“ is sometimes used as a synonym.

are considered derogatory terms. Therefore, for the purpose of this thesis, only the terms “Finnic” and “Saami” are used.

Both language groups are spoken in Northern Europe. The Finnic languages particularly belong geographically mostly to Fennoscandia and around the Baltic, while the Saami languages are spoken only in an area stretching from central Sweden through northern Norway and northern Finland to the tip of the Kola Peninsula in Russia. The region inhabited by the Saami people is called Sápmi. A noticeable difference when presenting the Finnic and Saami languages together is that two of the Finnic languages carry the status of official languages in the country in which they are spoken. Finnish (and Swedish) is the official language of Finland, as Estonian is in Estonia. In contrast, no Saami language carries the status of being an official language of any country, only an officially recognized minority language. For instance, in Finland, the Saami languages have had the official status of being recognized minority languages since 1992; in Norway, they have been recognized since 1998 and in Sweden, since 1999. In Russia, the Saami languages do not have legal recognition.

The Finnic and Saami languages consist equally of several almost-closely-related languages; however, the languages are in most cases not mutually intelligible.

The Finnic language group consists of 8–10 languages and is divided into Northern and Southern Finnic. The Northern Finnic subgrouping contains Finnish, Karelian, Ludic, Veps, Ingrian, Meänkieli and Kven. In the Southern subgrouping, there is Estonian, Votian and Livonian.

The Saami languages, on the other hand, include 10 languages, which are grouped into Western and Eastern Saami. The Western subgrouping consists of South, Ume, Pite, Lule and North Saami. The Eastern subgrouping includes Inari, Skolt, Akkala, Kildin and Ter Saami.

It is essential to consider the complexity of where to draw the possible border between a dialect and a language when discussing most of the Saami languages as well as with

Meänkieli and Kven. According to Kulonen (2005), the main criterion is based on the mutual comprehension between the languages, such that speakers of the different languages should not naturally understand each other. The borders between the Saami languages are usually represented based on the boundaries of individual features. If many isoglosses coincide, this should indicate a clear boundary between language varieties. But, often, they do not coincide.

The Saami languages do not have deep linguistic boundaries, so the differences among them could be characterized the same way as, for instance, various Germanic languages' differences.

There are no proper statistics of the exact number of native Saami speakers since the criteria of native speakerhood are not clear. Additionally, it is difficult to know how many Saami speakers have a Saami identity from which some of them may have acquired Saami as their first language, whereas others may have reclaimed the languages only later in their lives. How many non-Saami people speak Saami is also unknown.

2.2 Early research

This section concerns the history of research on the Finno-Saamic affinity, which will be chronologically discussed from the earliest attestations of scholars up to contemporary research.

As previously mentioned, this text is based on *Finnisch-Ugrische Sprachforschung* by G. J. Stiper (1990) and *Finno-Ugrian Language Studies in Finland 1818 - 1918* by M. Korhonen (1986) because these sources are well structured and discuss the history of Uralic studies in detail. The purpose of this subsection is to provide a clear picture of how the Finno-Saamic affinity was gradually discovered and to highlight important scholars within this field. The background of the history of Uralic linguistics will not be

treated in full, and therefore, the discussion is restricted to extracts concerning only the research history of the Finno-Saamic languages and their affinity.

The first attested mention of the Saami and Finns or, perhaps, Permic peoples was documented in the travel report of a Viking named Ottar from Hålogaland. During his journey, Ottar sailed along the coast of northern Norway and around the Kola Peninsula to the White Sea. His journey report, which was originally dedicated to the English King Alfred the Great in 870, informed the king about the inhabitants of that area. Ottar mentioned the *Finnas*, which could possibly have referred to the Saami people, and the *Beormas*, which could have referred to either the Finns or the Permic peoples. According to Ottar's statement, both peoples spoke almost the same language.

Based on a later report from the 11th century, it was discovered that the *Beormas* from the Kola Peninsula had an idol *Jómali/Jómala*, which is the same as the Finnish word *Jumala* (God), and therefore the *Beormas* of the Middle Ages could have been the ancestors of the Karelians. From a linguistic point of view, Karelian is closely related to Finnish, and during the 8th century, any difference must have been small, likely at the level of dialect, so the two must have been practically the same language. In addition, the difference between Finnish/Karelian and Saami must have been much smaller, even though they were already two separate languages.

In 1544, a work called *Cosmographia* was published by Sebastian Münster that aimed to describe the world. Münster possessed up-to-date knowledge in his time on contemporary research in geography and ethnology through editing the works of ancient authors. The 4th book of *Cosmographia* was dedicated to Gustav Vasa² and focused on Scandinavian countries, together with Finland and Lapland.

His sources were based on oral discussions with representatives of the Swedish and Norwegian churches; however, the sources specifically used for Finland are unknown.

² Gustav Vasa was originally Gustav Eriksson and he was the King of Sweden between 1523 and 1560.

Cosmographia is considered an important contribution to the field of Finno-Ugric studies and is one of the oldest monuments to the Finnish language, since Münster delivered a speech example of the Finnish language with a German translation of the Lord's Prayer.

His intention was to demonstrate how different Finnish was from Swedish. But, at the same time, he mentioned the affinity between Saami and Finnish as well as between Finnish and Estonian in a sense, as he emphasized the original language of the inland inhabitants compared to the Swedish-speaking coastal population of Finland and so connected it with Saami and Estonian.

Similarly, in the same time period, the Swedish bishop Olaus Magnus from Uppsala began his contribution to research during his stay in Italy. He wrote geographic, historical and cultural works focusing mostly on his homeland, but he also dedicated his writings to the whole north of Europe. Due to his educational background from European universities, Magnus was familiar with the intellectual currents of that time and the basics of diverse humanistic training, such as in geography and cartography.

Once he returned to Sweden, Magnus joined the explorers of ecclesiastical, political and social conditions, starting first in North Sweden and proceeding to the trading center of Northern Finland (Tornio) through Norway and Finnmark. This journey provided him with the opportunity to meet the Finns and Saami. Followed by his stays in various European cities, Magnus originated the idea to write a large, representative work to paint a picture of the north.

His method was innovative, in a sense, because he extensively used ancient, medieval and contemporary sources as well as citations. Additionally, the work itself was innovative since he offered descriptions of peoples and the coexistence of their languages based on material that he himself collected. He considered climatic and other natural conditions but also provided factual and precise folklore comparisons with similar phenomena in other parts of Europe.

The most interesting parts of his work are the facts on the languages. According to Magnus, Saami and Finnish were different from the Scandinavian languages. He clarified

that the differences were due to the isolation of individual groups caused by great distances and the diversity of the tribes. Thus, the work achieved its purpose, namely the rectification of prevailing ideas about the north of Europe, with specific mention of the Saami and Finns.

Another personality to mention is Georg Stiernhielm, who showed interest towards questions concerning relationships and origins of languages. In 1571, his translation of the Gothic Bible of Ulfilas has been published, where he supported the idea of the original world languages to be divided into different dialects.

By scrutinizing relationships between different languages in the manuscript *Ungarica convenientia cum Finnonica*, Stiernhielm discussed examples such as the Hungarian *két*, Finnish *kaksi* (two), *vaj/voi* (butter) and *tél/talvi* (winter) and supposed that Finnish and Hungarian did not belong to the same language family as the rest of the European languages.

At the same time, he regarded Saami and Estonian as dialects of Finnish, through which Saami was also associated with Hungarian. Similar to him, Martin Fogel has also supported the view that Saami differs from Finnish only as a dialect.

A little later, in 1599, Joseph Justus Scaliger took the initiative to provide an objective and modern language classification. In his European language list, he assumed eleven “matrices”, in which four languages (Latin, German, Greek and Slavic) were considered to be the larger languages and the rest of the seven languages (Albanian, Tatar, Hungarian, Finnish together with Saami, Irish, Bask and Old English) were considered small. However, his matrices, which were language families, were not related. Thus, Hungarian was not related to Finnish at all; however, Finnish was grouped together with Saami.

During the 17th century, public interest turned toward Lapland. Queen Christina of Sweden appointed Johannes Scheffer to Sweden in 1648 with the task of writing a truthful description of Lapland and the Saami. Scheffer’s most widely read book *Lapponia* was published in 1673 and is today considered a crucial contribution to the history of Finno-

Ugric language research. In his book, Scheffer discusses various points of view on the treatment of individual questions about the origin of Saami as well as the affinity of Finnic and Saami.

In addition, he presents various comparisons between Saami and Finnish, such as word formation, word inflection and the variety of verbal inflections in tenses and modes. All of these comparisons can be found in paradigms of both languages.

According to Scheffer, the Saami language is a mixed language patched together from scraps of words from Swedish and several other languages. According to Scheffer's theory of language shift, the Saami had their own original language before adopting a new one. As they immigrated to Scandinavia, they ceased using their own original language and shifted it to Finnish due to their new contact with them.

However, the vocabulary seems to have caused difficulties for Scheffer. The differences between both languages are so great that the Saami and Finns can barely understand each other. This fact raised doubts about the connection between these languages. In addition to his theory of language shift, Scheffer also discussed the possibility of a close affinity between Saami and Samoyedic.

The next researcher of note is Mikael Wexionius-Gyldenstolpe, who was one of the leading encyclopedists of his time in addition to providing modern systematic overviews of countries and their peoples, including their histories. He also uncovered new ground in linguistic research. The third part of his geohistorical study *Epitome descriptionis Sueciae, Gothiae, Fenningiae et subjectarum provinciarum* (1650) is dedicated to languages and discusses grammatical comparisons among Estonian, Finnish and Saami. These comparisons were of the inflectional paradigm. This was the first step in the field of comparative Finno-Ugric linguistic research that considered the structure of the languages.

Wexionius analyzed the relationship between the languages based on grammatical correspondences and so placed them within units according to the degree of closeness. As a result, he claimed that Estonian and Finnish share the same foundation. Concerning specifically the Finno-Saamic relation, Saami is, according to him, an offspring (*proles*)

of Finnish

Soon after, Johannes Scheffer returned to the scene and continued to research the affinity question, based on Wexonius's view, by scrutinizing the comparison between Saami and Finnish. He concluded that the great differences in Finnish and Saami vocabulary were due to the older age of Saami, which must have been the descendant of the old Finnish language and retained the original form of Finnish.

In 1769, János Sajnovics joined an expedition to Vardø in Norway with his teacher and friend Maximilian Hell. The goal was to observe the transit of Venus. Since Sajnovics was familiar with Scheffer's work *Lapponia*, he pursued the idea of Saami and Finnish being related to Hungarian.

The expedition was an opportunity for him to study the question of linguistic affinity at the same time. In 1770, Sajnovics's *Demonstratio idioma Hungarorum et Lapponum idem esse* was published, in which he demonstrated the relationship between Hungarian and Saami. His comparison of languages can be characterized as innovative, since grammatical correspondences were studied.

The earlier-mentioned scholars mostly used the lexicon for their comparisons, whereas Sajnovics emphasized the importance of grammatical features, such as declension, comparison and conjugation. Sajnovics also used lexical correspondences, and many of his etymologies are still considered correct, whereas some of his etymologies have been proved false because they were based on accidental similarities.

The next scholar of note is the Danish Indo-European linguist Rasmus Rask. Although his field of work extended from ancient Indian through the Caucasian languages to Iceland and Greenland, he also examined the relationships between the Finno-Ugric languages.

Rask focused on the structure of sounds and forms to elucidate a systematic description of the structured Uralic language family. In one of his works in 1814, he discussed Fin-

nish and Saami, especially regarding the changes in consonants and vowels in the nominal inflection (Fi *vuosi*, year; G *vuoden*, *vuoteni*, my year), and established that they were not related to similar phenomena in Danish, nor any Indo-European language. Rask devoted particular attention to Saami, not only because of the relationship between Finnish and Samoyed but also because of its relationship with the Eskimo language.

Apart from numerous comparisons between Saami and related languages, in 1823, Rask wrote the posthumous "Survey on the History of the Lappish and Finnish Tribes," in which he compared Saami, Finnish and Estonian.

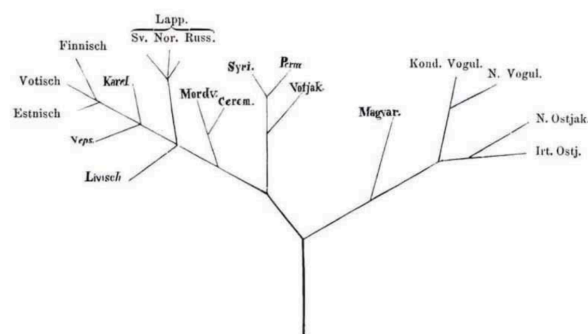
During his stay in St. Petersburg, Rask found rich material in the academy library and archives for his Oriental as well as Finno-Ugric language studies. He dedicated his time to writing and collection and composed a thorough overview of all of the Uralic peoples. Although his interest was directed more toward the Orient, he developed a plan to conduct research trips to study the Finno-Ugric peoples in Russia for two years.

Since he could not achieve this plan, he sent part of his paper on Finno-Ugric language groups to his friend in Copenhagen before continuing to the Caucasus. After some time, he published further explanations on the Finno-Ugric topic.

In his work *Afhandling om Sprogkyndigheden (Lingvislikken) isar definniske Folkeslags Inddeling*, Rask's systematic grouping of the Finno-Ugric languages is not based on any scheme; however, he starts with the peoples who have these languages as their distinguishing factor. For the first time in the history of Finnish-Ugric linguistics, he divided the ethnic and linguistic complex into three classes: 1) the Finnic, 2) the Ugric and 3) the Biarmic (Permic). The Finnic groups consists of three additional subgroupings: 1.1 comprises a southern group of the Finns, Karelians, Estonians and Livonians; a northern group with Norwegian, Swedish and Russian Saami and an eastern group consisting of Mari and Mordwinians. Group 2.1 is composed of Hungarians, Mansi and the Khanty people. The last subgrouping, 3.1, consists of Permic people (Komi and Udmurts). The individual groups are each characterized linguistically by comparative word lists, declension/suffix paradigms and conjugation examples. This structure has mostly remained to this day despite the separate language groups. From Rask's work, it is clear that he already regarded Saami and Finnish as being closely related.

Elias Lönnrot, popularly known as the author of the Finnish national epic *Kalevala*, had studied Inari Saami, and he was convinced that Saami was the closest of the distantly related languages to Finnish. In his lecture on February 14th, 1852, he partly pursued the idea of a common source; however, it was impossible to determine when Finnish, Saami and Estonian became different languages. Additionally, he was certain that at the time Saami became a separate language, Estonian and Finnish were still one language. According to him, Saami could have been, to some extent, a link between Finnish, Estonian, Mari, Komi and Hungarian.

Another scholar, Otto Donner, a professor of Sanskrit and Indo-European linguistics, attempted to show in his work “*Die gegenseitige Verwandtschaft der finnisch-ugrischen sprachen*” in 1879 that Saami and Finnic belonged to the same “West Finnic” group and should have been closest to Livonian. Donner built his classification on numerous phonetic and morphological criteria. As a consequence, he divided the Finno-Ugric languages into Finnic (in which he counted Finnish together with Saami) and Ugric. His work also additionally offers a classification of languages as a genealogical tree model.



(O. Donner in *Finnisch-ugrische Sprachforschung*, G.J. Stipa, 1990)

Karl Bernhard Wiklund must be mentioned next. In his dissertation “*Entwurf einer ur-lappischen Lautlehre*” in 1896, he defended his theory of “Proto-Lappisch.” A key fac-

tor in Wiklund's view was his understanding of how race and language are two different entities. By comparing the Saami language and Finnish, he concluded that ancient Saami was identical to early Finnic. However, since the Saami are of a different race than the Finns, Wiklund concluded that the Saami once spoke their own non-Finno-Ugric language, which was later forgotten in favor of the language of the Finns. However, this language shift did not take place all at once but required a long period of time during which the Saami gradually adopted the vocabulary and grammar of early Finnic. Thus, they gradually forgot their original Proto-Lappisch language.

Finally, a few more contemporary scholars who dedicated their research to the Finno-Saamic relation will be mentioned.

Mikko Korhonen (1936–1991) was a Finnish linguist who, among other publications, published the book *Johdatus lapin kielen historiaan* (1981). The book discusses the history of the Saami languages, and he emphasizes and supports the idea of a common Proto-Finno-Saami language (*varhaiskantasuomi* in his terminology). Therefore, it can be said that, for Korhonen, the close relationship between Finnic and Saami is clearly explained by the existence of a common, intermediate proto-language.

Another important linguist of the 20th to 21st century focusing on the Finno-Saamic relation is Pekka Sammallahti. His research is mostly dedicated to various Saami languages; however, the *suomalais-saamelainen kantakieli* (the Finno-Saami proto-language in his terminology) has been mentioned and supported numerous times in his publications. For instance, in his book *The Saami Languages: An Introduction* (1998), Sammallahti, besides discussing the Saami languages, also describes various developments with starting points in Proto-Finno-Saami that have occurred until the modern Saami languages were formed. In another article, “*Saamen kielen ja saamelaisten alkuperästä*” (1999), Sammallahti presents and discusses various arguments that could account for common innovations. This article also served as a criticism of T. Itkonen’s (1997) attempt to reconstruct a specific Finno-Saamic vocabulary.

The most contemporary linguist of Saami origin of note is Ante Aikio, whose research mostly focuses on the origin of Saami, in which the Finno-Saamic relation has not been excluded. In his article “*An essay on Saami ethnolinguistic prehistory*” (2012), Aikio discusses the position of Saami in the Uralic language family and mentions its special relationship with Finnic. He regards the validity of Finno-Saamic genetic subgrouping based on a common intermediate proto-language as a complex question to answer because, according to him, “How one should evaluate the arguments for and against a Finno-Saamic genetic subgrouping depends on what kinds of probative power one assigns to the various levels of language in taxonomical questions” (p. 68). Later in the article, he also mentions Finno-Saamic as a dialect continuum (discussed later in Section 6.2).

To summarize, this section was dedicated to the research on the Finno-Saamic relation and its discovery. The first mention and notice of similarities between Saami and Finnic originated in the 9th century, as Ottar from Hålogaland observed that the languages of the *Finnas* and *Beormas* were almost the same. This phase could be characterized as a prescientific phase, which was mostly based on perceptions, description of peoples and languages without any scientific support. This was because there was no universal method for language examination and classification developed yet.

In the 14th–16th century during Renaissance humanism, initiatives toward discovering and acquiring the knowledge of reality had begun. Research on language was mostly part of multidisciplinary projects, such as Münster’s *Cosmographia*, which was a description of the world, or O. Magnus’s geographic, historical and cultural works in which he contributed facts about Saami and Finnish.

Toward the end of the 16th century, the focus on the relationships and origins of languages intensified, and Stiernhielm in his manuscript *Ungarica convenientia cum Fennonica* claimed that Saami differed from Finnish only as a dialect. Later, Scaliger provided a language classification in which Finnish was grouped together with Saami in matrices.

In earlier periods, the conception of the Uralic language family as a whole did not exist. It was not until the 17th–18th century that scientists accumulated comprehensive know-

ledge about the Finno-Ugric languages, such as materials and language comparisons. For instance, Scheffer in his work *Lapponia* presented comparisons between the morphological structures of Saami and Finnish, and based on the similarities he found, he claimed that a language shift had taken place. Soon after, the encyclopedist Wexionius presented grammatical comparisons between Finnish and Saami in a geopolitical study. Concerning the Finno-Saamic relation, according to him, Saami was an offspring of Finnish.

However, certain methods were still needed to examine the relationships between languages to classify them precisely based on their linguistic affinities and to understand language change. It was at the end of the 18th century when research on historical-comparative linguistics was methodologically established due to the discovery of the Indo-European language affinity³. In Finno-Ugric studies, Sajnovics, Rask and Donner were scholars who emphasized methodological classifications and descriptions of the Uralic language family, from which it became clear that Saami and Finnish were closely related languages to such an extent that Saami and Finnic belonged to the same West Finnic group.

It has been demonstrated that the affinity between the Finnic and Saami languages was a result of gradual research and discovery, which begun by the study of countries, peoples, cultures and, much later, individual Uralic languages. As the understanding of observable similarities between Finnic and Saami developed, and with increasing documentation, a method beyond listing intuitive similarities was developed from the late 18th century on. In addition, the contemporary scholars Korhonen, Sammallahti and Aikio have further discussed the Finno-Saamic affinity by emphasizing the intermediate proto-language.

³ The discovery of the Indo-European language affinity is mostly associated with Sir William Jones, in 1786, when he noticed that some kind of affinity can be observed in both roots of verbs and in the forms of grammar in different languages. Then the idea came up, that these couldn't have been produced by accident but instead must have a common source that perhaps no longer exists.

2.3 Proto Finno-Saami

This section provides a picture of the once-spoken Proto-Finno-Saami language. The following questions will be answered in detail: What is Proto-Finno-Saami? When and where was it spoken? What happened after? How was its structure? In the following subsection, the language's structure is presented, and the vowel system, consonant system, morphology, syntax, case system and innovations are discussed.

The Proto-Finno-Saami language is a hypothetical reconstructable language of all of the contemporary Finnic and Saami languages. This signifies that once, in prehistory, the Finnic and Saami languages formed one single language before diverging into two different forms: Proto-Finnic and Proto-Saami.

According to M. Korhonen (1981:27), the Proto-Finno-Saami language was possibly spoken in the south, east and perhaps north of the Gulf of Finland between 1500–1000 BC. Its linguistic ancestor was the Proto-Finno-Volgaic language, from which later Proto-Mari and Proto-Mordvinic also developed. Other datings have also been suggested as the latest, such as 500 BC (Toivonen, 1953), 1000 BC (Taagepera, 1994) or 2500 BC (Sammallahti, 1988). The datings are based on the analyzed Baltic loans, for example in Saami, where the phonetic structure reveals a Proto-Finno-Saamic background. But the dating is also based on the end of the Proto-Finno-Volgaic period, after which the speakers of Proto-Finno-Saami arrived in the Baltics (E. Itkonen, 1966).

Based on Korhonen's suggestion, the Proto-Finno-Saamic language would only have lasted for a half millennium. Apparently, its period ended immediately after Baltic contact begun. Consequently, Proto-Finnic and Proto-Saami emerged as two differentiated languages, which developed further on their own. Since then, both languages have always been in strong contact due to their neighboring geographical positions.

However, according to the current view, the primeval homeland of Proto-Finno-Saami seems to have been in the region near the Volga, Oka and Kama rivers. Additionally, the chronologies have changed (further discussed in Section 7.1). According to the Finnish mainstream literature, the pre-forms of Finnic and Saami are connected with the spread of Northwest Uralic and the Seima-Turbino phenomenon in the Bronze Age.

2.3.1 The vowel system

In this section, I present the vowel inventory of the Proto-Finno-Saami language. Then, the differences between this vowel system and Proto-Saami and Proto-Finnic are discussed. This order of presentation will be the same for all of the subsections of the chapter.

The vowel system of the initial syllable in Proto-Finno-Saami consists of 11 vowels and can be represented as the following:

i	ü	u
e		o
ä		a

ī		ū
ē		ō

(E.Itkonen, 1961, M.Korhonen 1981)

The vowel system of the non-initial syllable is the following:

e		o
ä		a

(E.Itkonen, 1961, M.Korhonen 1981)

The Finno-Ugric transcription (UPA) markings above the letters, such as *ī*, *ē*, *ū* and *ō*, symbolize length. Therefore, according to the older view, *i*, *e*, *u* and *o* could also appear as long vowels in Proto-Finno-Saami, since these long vowels were thought to be an archaic inheritance from previous language stages. In contrast to the newer view (Py-stynen, 2018), the long vowels can be ultimately considered as a particular innovation of Finnic that were originally introduced as loanword phonemes. Evidence supporting this different view includes an early Indo-European loanword showing long vowels, **soola* (salt).

By comparing this Proto-Finno-Saamic vowel system with its descendant, Proto-Finnic, and its sister language, it can be said that the Proto-Finnic vowel inventory is similar to that of its previous stage; however, as an innovation, all of the vowels could occur long. Additionally, the new phoneme **ō* has been introduced to the inventory. However, this phoneme was added to the paradigm relatively late (Laakso, 2001).

i	ü	u
e	(ö)	o
ä		A

(J.Laakso, 2001: 182)

The Proto-Saami vowel system, on the other hand, differs visibly from that of its ancestor and its sister language. It has developed into a radically different form due to a phenomenon called the Great Saami Vowel Shift, which reorganized the entire Proto-Saami vowel system without leaving a single vowel untouched:

ie i		u uo
ea	ě	o oa
	ā	

(A.Aikio, 2012:70)

2.3.2 The consonant system

This section provides a brief description of the reconstructed consonant system of Proto-Finno-Saami. Additionally, some peculiarities concerning similarities with previous language stages will be pointed out. For this purpose, the Proto-Finno-Ugric and Proto-Uralic consonant system will be mentioned.

The consonant system in Proto-Finno-Saami is the following:

p		t			k
		č		ć	
		δ		δ'	
	s		š	ś	
v				j	
		l			
		r			
m		n		ń	ŋ

(M.Korhonen 1981, p. 126)

The consonant system consists of three stops, **p*, **t* and **k*. It is also possible that geminate consonants existed in words, such as **pp*, **tt* and **kk*. In older reconstructions, the dental fricative **δ* and **δ'* have been identified, but today, in contrast, they are regarded as phonetically implausible. However, Saami is the only branch of the language family in which the nonpalatalized consonant **δ* occurs as a voiced dental fricative. This is because, according to Aikio (2019, p. 9-10), the consonant **δ'* (he uses **d'*) seems to have been a palato-alveolar counterpart of **δ* (**d*), whose reflexes in the western branches have merged with **t*, **l* or **r*. But, in the other branches, the reflexes of *δ* (*d*) ap-

pear as voiced alveolo-palatal in Permic and Mansi and as palatal consonants in Khanty, Samoyed and Hungarian.

All of the consonants could appear initially in a word, except for **δ* and **ŋ*. In a word's final position, **t*, **k*, **s*, **š*, **j*, **l*, **r*, **m* and **n* could appear. However, the appearance of **ć* and **ś* in a word's final position is still questioned. Initial consonant clusters are also unknown.

Concerning the reconstructed consonant system of Proto-Finno-Saamic, it closely resembles the reconstructed consonant system of previous stages, such as Proto-Finno-Ugric and, similarly, Proto-Uralic. It has been remarked upon that “Erityisesti kantaurlista varhaiskantasuomeen johtavat konsonanttimuutokset olivat jopa niin harvalukuisia, että varhaiskantasuomi voitaisiin oikeutetusti luokitella pelkäksi kantaurlin murteeksi” (“Particularly, the consonant changes leading from Proto-Uralic to Early Proto-Finnic were so few that Early Proto-Finnic could justifiably be classified as a dialect of Proto-Uralic.”; Kallio, 2007)

For instance:

p		t			k	
		c				
		δ		δ'		
	s			ś		
v				j		
		l				
		r				
m		n		ń	ŋ	
				w		x

(Proto-Uralic consonant system by P. Sammallahti 1988, p. 482)

p		t			k	
		č		ć		
		δ		δ'		
	s		š	ś		
v				j		
		l	l'			
		r				
m		n		ń	ŋ	
						x

(Proto Finno-Ugric consonant system by P. Sammallahti 1988, p. 491)

In comparison with the Proto-Finno-Saami daughter languages, the Proto-Finnic consonant system differs only in the sense of phoneme reduction: **ś*, **ć*, **d'* and **ń* became depalatalized, and **š* and **č* disappeared.

The Proto-Saami consonant system is fairly conservative, and in comparison with Proto-Finnic, the palatalized phonemes have been preserved. Additionally, the sibilant **š* and the affricate **č* have changed into dentals.

2.3.4 Morphological structure

Proto-Finno-Saamic could have been an agglutinating language. A combination of morphemes was possible, and there were a few morphophonemic alternations. In other words, the language allowed the building of, at times, extremely complex word forms through an extensive range of suffixes. M. Korhonen (1974) has noted, however, that due to comparative methods, in general, the reconstructed proto-languages became more agglutinative when increasing the time depth. Therefore, he suspects that the degree of agglutination preceding Finnic increases. This is because it is not possible to reconstruct all of the alternations that existed in the once-spoken proto-language. These alternations have vanished without leaving traces in the daughter languages on which the reconstruction is based.

Thus, the fact that Proto-Finno-Saami was an agglutinating language should be considered with caution.

In comparison, Proto-Saami shifted toward a more fusional morphology due to consonant gradation, contractions and metaphony. Furthermore, the Proto-Finnic language has preserved agglutination; however, as has been discussed above, this might appear as a methodological illusion.

Regarding the Proto-Finno-Saamic stems, these were either disyllabic stems ending in a vowel, for instance VCV, CVCV, VCCV or CVCCV, or monosyllabic stems also ending in a vowel, such as V and CV. Most stems were of the first type, while pronouns and auxiliary verbs were monosyllabic.

In comparison with its daughter languages, the Proto-Finnic as well as Proto-Saami stems have been generally preserved. The only difference is that, in Finnic, some disyllabic stems became monosyllabic, while in Saami they did not change.

2.3.5 Syntax

The Proto-Finno-Saamic syntax could be characterized as the domain of many innovations. These are only quickly mentioned in this section since more attention is devoted to syntactic innovations in Chapter 6. These features make the Finnic and the Saami languages unique among the Uralic language family.

One of the syntactic characteristics of Proto-Finno-Saami is the introduction of a new word order, SVO (subject-verb-object), which is also specific among contemporary Finnic and Saami languages. In earlier stages, such as Proto-Finno-Ugric, SOV (subject-object-verb) was used, which is still present among the other contemporary Uralic languages.

Secondly, the copula in the nominal predicate of the subject became necessary.

The agreement of adjective modifiers may then have appeared in Proto-Finno-Saami.

Conjunctions may have appeared last, since there is no evidence of their existence in previous language stages.

2.3.6 The case system

According to T. Lehtinen (2007), the case system of Proto Finno-Saami would consist of 11 cases:

NOMINATIVE: **-ø*

GENITIVE-INSTRUCTIVE: **-n, *-j*

ACCUSATIVE: **-m*

PARTITIVE: **-tA*

ESSIVE: **-nA*

TRANSLATIVE: **-kse*

INESSIVE: **-snA*

ILLATIVE: **-jen/sen*

ELATIVE: **-stA*

COMITATIVE: **-jne*k**

ABESSIVE: **-ktak*

2.3.7 Innovations

The Finnic languages, together with Saami, share some specific linguistic features that are suggested to have originated from their common proto-form. Some innovations have been suggested by M. Korhonen (1981:34), and others have been suggested by P. Sammallahti (1999:71). In what follows, Korhonen and Sammallahti's lists have been conflated. Each innovation will be analyzed and discussed in detail in the next chapters.

- The consonant gradation
- Labial vowel in non initial syllable
- The loss of initial *w before a short rounded vowel
- The comparative marker
- The imperative marker: **ka/*kä*
- The conditional and potential markers: **ń(ť)ś* and **k(ť)ś*
- The infinitive marker: **tak/*täk*
- Specific vocabulary
- Loanword diffusion

III. Phonological arguments

This third chapter is dedicated to phonological arguments, which include consonant gradation, the labial vowel in a non-initial syllable and the loss of **v* before a rounded vowel. First, consonant gradation will be presented, and its function will be briefly discussed. Since it is one of the most debated topics in Finno-Ugric studies, my analysis consists of four subsections, each discussing one strong possible explanation that will be scrutinized. The second and third argument follow the same method; however, they consist of fewer subsections.

3.1 The consonant gradation

Consonant gradation (henceforth shortened as CG) is a term used for the alternation of consonants, which takes place in all contemporary Finnic languages, except Livonian and Veps, and in all of the contemporary Saami languages, except Southern Saami. This phenomenon can be also found in the Samoyedic languages: Nganasan, Nenets and Ket' Selkup.

The alternations usually operate between strong and weak grade, though North Saami and Estonian, for instance, have an additional third grade of alternation. From a historical point of view, there is a gradation between strong and weak grade, and the "third grade" is a secondary phenomenon resulting from the lengthening of the strong grade.

Historically, the strong grade appeared before the vowel of an open syllable and the weak grade before the vowel of a closed syllable. The nature of the phenomenon was a lenition in which a long plosive shortened at the beginning of a syllable. In Saami, however, the CG was realized as a fortition of the strong grade.

The alternation is either quantitative or qualitative. For instance, in Finnish, *kukka*

(flower) in G.SG becomes *kukan*, and therefore this is a case of quantitative change. A qualitative change occurs, for example, in the word *leipä* (bread), where in G.SG the word becomes *leivän*.

Traditionally, there is a difference between radical gradation and suffixal gradation. Radical gradation occurs in the root of the word and was historically conditioned by the openness or closeness of the following syllable. Therefore, the weak grade appeared at the beginning of a closed syllable and the strong grade at the beginning of an open syllable. However, radical gradation is not restricted only to the roots of words and can be found in certain derivational suffixes, such as in the Finnish word *asunto* (flat), in which the derivational suffix *-nto* alternates to *asunnon* in G.SG.

Suffixal gradation, on the other hand, occurs in suffixes and is conditioned by the stress of the preceding syllable. The strong grade appears after a stressed syllable and the weak grade after an unstressed syllable. Today, the suffixal gradation is considered to be mostly lost in contemporary languages.

Due to the diverse proposed explanations that are discussed in this chapter, CG can be considered as one of the most important unsolved topics within Uralic historical-comparative linguistics. In other words, no stable common agreement among scholars has been found. Generally, the dominant proposed origins are that the CG has Proto-Uralic roots or that the CG could have resulted from the influence of Verner's law, which occurred in the Germanic languages. This fact cannot be denied either, since both Proto-Finnic and Proto-Germanic have been in contact with each other, which has been demonstrated by various loans between these languages. Another possibility is that the CG in Finnic, Saami and Samoyedic occurred due to parallel developments. But, at the same time, this might be an indication of an ancient connection between Saami and Samoyedic. Finally, the CG might be a common Proto-Finno-Saamic innovation. Thus, the different theories and arguments are here discussed further.

3.1.1 A Proto-Uralic origin?

CG being an old phenomenon was addressed in the *Stufenwechseltheorie*, which was developed and proposed by E. N. Setälä in his article “*Yhteissuomalainen äännehistoria*” (1891). During his time, Setälä scrutinized the origin of CG and obtained differing results.

As Setälä examined the „consonant softening“ in Finnish, Estonian and other Finnic languages, he believed that it could have originated from the Proto-Finnic phase and the period when Baltic and Germanic contact took place. According to this old theory, in Proto-Finnic the stops were invariable (possibly voiced) mediae **b*, **d* and **g*, and they strengthened into the voiceless stops **p*, **t* and **k* in an open syllable following the vowel of a syllable with primary or secondary stress, but also after a consonant. In a closed syllable and following a vowel in an unstressed syllable, the stops weakened into the fricatives **β*, **δ* and **γ*.

Because these alternations operated in both language groups, Setälä considered these as independent of each other but as having a certain type of connection that he explained as being based on a language influence. Finns and Saami were early neighbors, and therefore Saami was exposed to a high degree of influence from Finnic. The alternation of consonants was essentially a change of accent, which occurred due to the mutual influence of two different languages and through the mediation of two linguistic individuals from the same geographic area.

Later, Setälä (1896) changed his opinion on CG and pursued the idea of its origin being in the Proto-Finno-Ugric language, where the alternation took place as a phonological phenomenon. The strong grade operated in voiced environments, whereas the weak grade operated in unvoiced environments. Additionally, the mechanism affected all medial consonants, even vowels of the first and second syllables of a word. The gradation was partly quantitative and partly qualitative.

During the 20th century, research in the field of Uralic linguistics began to focus on the Samoyedic languages from different sides. This provided Setälä with the opportunity to familiarize himself with the same alternating phenomenon among the Samoyedic languages, and, consequently, the *Stufenwechseltheorie* took a new direction.

In two lectures in 1909 and 1912, Setälä approached CG from another perspective, considering its presence in peripheral branches of the Uralic language family. In his later published article “*Über Art, Umfang und Alter des Stufenwechsels im Finnisch-ugrischen und Samoiedischen*” (1912), he argued that CG in Proto-Finno-Ugric was quantitative as well as qualitative and that all consonants were involved. Additionally, a similar CG operated in Samoyedic languages. Therefore, the presence of CG in both branches must have been a result of a common inheritance.

Another scholar pursuing CG as an old Proto-Uralic phenomenon is E. Helimski (1995). Similar to Setälä in his later research, Helimski assumed that the similarities between the operating mechanisms of CG in Saami, Nganasan and Finnic were due to a common origin. His research focused on the search for possible gradational pairs that could have participated in Proto-Uralic CG. Helimski’s first intention was to attempt to determine the original set of consonant pairs in the strong grade as well as in the weak grade. It was not impossible for him to imagine that all consonants could have participated in the process. However, the subsequent developments that occurred naturally during the development of the Uralic daughter languages caused him serious difficulties in the reconstruction of original pairs.

He considered it possible that one of the original gradational pairs had been *ś in the strong grade with *j in the weak grade. Later, the consonants underwent changes. For instance, in Proto-Finnic, *ś lost its palatality to *s, and *j was replaced by *z. In another change that took place in Proto-Finnic, *z transformed into *h. As evidence, Helimski pointed to the correspondence *s : *h, which can be found in the Finnish demonstrative pronoun in ILL *tässä* : *tähän*. Another example that could support the original gra-

dation pair was in the Votic language. A development occurred in which the new phoneme *z* was introduced in the language, and it was reflected as *s* : *z*. For example, compare *pesä* (nest): *pezäd* (N.Pl) or **makasi* from Late-Proto-Finnic with *makazi*.

It was also possible that Proto-Uralic CG already distinguished between a strong and weak grade. In an earlier study, Helimski (1992), by scrutinizing PU and PFU bisyllabic consonantal stems together with bisyllabic and trisyllabic vocalic stems, noticed that approximately five stems possessed **δ* in a word-medial position. However, no **t* had been in the same word position—for instance, **śüδam* (heart) or **uδar* (udder). This would suggest an early distinction of a syllabic gradation between **t* in the strong grade and **δ* in the weak grade. On the other hand, a gradationally neutral **δ* is also possible. Thus, both examples **ś* : **j* and **t* : **δ* could serve as possible proof of a PU phonologically distinctive mechanism.

After the presence of CG in Finnic, Saami and Samoyedic has been discussed, considerable attention needs to be paid to its absence among all of the other contemporary Uralic languages. This argument is more likely in favor of a non-PU origin. However, Helimski assigns this absence to various phonetic changes that have occurred in several Uralic languages, which have abolished the function of the CG. Changes such as voicing, fricativization or a complete loss have taken place among some Finnic languages, in Southern Saami as well as in Mordvinic, Mari, Permian, Hungarian, Nenets, Enets, Central and Southern Selkup, Kamassian and Mator. For instance, in the Permian languages, the voiceless consonants *k*, *t* and *p* developed in an intervocalic position into the voiced fricatives *ɣ*, *δ* and *β* and replaced the double consonants *kk*, *tt* and *pp*. Consequently, the mechanism of the CG could have no longer been productive. Additionally, as has been mentioned by E. Itkonen (1962: 195), the loss of unstressed vowels could account for the blocking of the CG's mechanism in some Uralic languages as well.

The contemporary Uralic languages that do not possess a CG underwent, according to Helimski, a process of “de-gradation” (1999:39). However, it is possible that traces can

still be observed. Based on the above-mentioned potential PU gradational pair of **ś* in the strong grade alternating with **j* in the weak grade, a few potential connections can be found among the Uralic languages (Laanest, 1982). The languages in the Finno-Ugric branch have preserved both **-ś-* as a preterite marker of a negative verb and **-j*. For instance, Mari possesses today a *-š-* preterite marker of a negative verb in one of the conjugational types⁴, which can be reconstructed as **-ś*. The same marker appears in the southern dialects of Estonian⁵ and Livonian. If **ś* : **j* does stand for one of the original gradational pairs in PU, then their reflection in the contemporary languages is a result of neutralization either in the favor of **-ś-* or **-j-* and carries possible traces of the de-gradated original CG.

Possible traces of gradation could also be hidden in Tundra Nenets and Tundra Enets, in which a possible alternation with the accordance of the radical gradation of **-se* and **je* could have taken place. In Tundra Enets, the suffix *-se* and *-e* are used in free variation to derive verbal adverbs from verbal stems. The same applies for Tundra Nenets. The only difference lies in the suffixes, where *-śă* and *-ă* are used. Therefore, Helimski suspected this to be a similar situation to **ś* : **j*.

Another potential PU consonant involved in CG could have been **pp*, which is reflected as *p* and *w* in Mari. In this case, the Mari *p* would reflect a distinction between the strong grade and its weak grade *w* as **pp* : **pǃ*. A few examples serve to illustrate this: **tup* > **tupp3* (back), **lop* > **lapp3* (indentation) and **lewet-* > **läpp3* (to cover).

Finally, regarding CG and its origin, while it is perhaps not of relevance in this topic, an interesting question is the purpose of its Uralic ancient roots. The answer lies in the domain of poetry, where a certain rhythmic balance is needed. The metric structure of Samoyedic and Finnic poetry illustrates the rhythmic conditions that gave rise to CG. Therefore, Helimski assumed (p. 44) that gradation originated from poetic speech and its

⁴ Every Mari verb belongs either to the conjugation type 1 or 2 and they differ only in morphology (Riese, Bradley, Yakimova, Krylova, A comprehensive introduction to the Mari language, 2020)

⁵ Kodavere dialects.

generalization occurred due to the “outstanding role” played by poetic, sacral and shamanic narrative in ancient Uralic society.

3.1.2 Germanic influence

A general Germanic influence on Proto-Finnic has already been understood from the Gothic theory. According to this theory, which was shared by Otto Donner, Vilhelm Thomsen and Johannes Aspelin, as the Proto-Finnic-speaking tribe arrived from the east in the regions of today’s Estonia and northern Latvia, they met an East-Germanic-speaking people called the Goths. From these people, the Proto-Finnic language received a strong Germanic influence during the Roman Iron Age. However, a possible Germanic background specifically for CG can be traced back to Lauri Posti’s superstrate theory.

Based on Posti’s article (1953), most of the Proto-Finnic consonant changes, including the CG, are results of a Proto-Germanic influence. More precisely, the consonant changes must have taken place due to the influence of Verner’s law (henceforth VL), which operated in Proto-Germanic. In this case, it can be assumed that the CG represents the effect of VL in the Finnic languages. Additionally, it was long thought that the Germanic influences were more recent than the Baltic ones and therefore were not reflected in the “Early Proto-Finnic” phase strata but only later in Finnic. Therefore, if the CG had arisen in Proto-Finnic due to the Germanic VL, the Saami CG would have to be of later origin, possibly due to Finnic influence. This idea may be supported by the fact that South Saami, the Saami variety that demonstrates the least Finnic influence, does not have CG.

In 1875, the Danish linguist Karl Verner described a historical sound change in the Proto-Germanic language, which was based on the exception found in Grimm’s law. According to Jacob Grimm in 1820, the Proto-Indo-European (PIE) voiceless stops **p*, **t*,

**k* and **k^w* changed into voiceless fricatives in Proto-Germanic (PG) as **f*, **T* and **x*. However, Verner noticed an irregularity: when the stress did not fall on the initial syllable, the Germanic equivalents were no longer voiceless fricatives but voiced stops. According to VL, the voiceless stops **p*, **t*, **k* and **k^w* of PIE underwent a change in certain contexts because of the change from a variable accent in PIE to a fixed initial accent in Germanic. When the voiceless stops appeared in medial positions, in a voiced environment or heading up a stressed syllable, they became voiced stops. Therefore, the following changes occurred: **p* > **b*, **t* > **d*, **k* > **g* and **s* > **r*. According to the traditional view, Grimm's law preceded VL. This would mean that VL did not affect original stops but their fricativized reflexes, and its outcomes were voiced fricatives, not stops. Thus, whether the voicing of Verner's law or fricativization if Grimm's law took place first is a debated topic in contemporary Indo-European studies.

Based on the influence of VL, Posti explains all of the consonant changes occurring between Proto-Finno-Saami (according to his terminology, "Early Proto-Finnic") and Late Proto-Finnic. However, for the purpose of this thesis, the focus going forward is on CG. CG is explained as an influence of Germanic superstrate from the Germanic-speaking tribes, as their pronunciation carried into Proto-Finno-Saami. Then, the Finno-Saamic speakers adjusted the pronunciation according to their own speech.

According to Posti, the Germanic speakers would have substituted the voiceless word-internal stops with voiceless fricatives (*pata* > **papa*), which then would have been voiced before long syllables, according to VL (**papan* > **paðan*), as the "weight" of the long second syllable was reinterpreted as "stress."

Later, this Germanic pronunciation gradually penetrated into the Finnic sound system because the Germanic tribes pronounced Finnish words in accordance with the already applied VL pronunciation. This change may have happened naturally but also intentionally due to the prestigious status of the Germanic language in the Finnic-speaking area.

However, some peculiarities concerning Posti's theory have been remarked upon by

Jorma Koivulehto and Theo Vennemann (1996). First, the hypothesis that Germanic speakers would have substituted Proto-Finno-Saamic stops with voiceless fricatives is not supported by evidence of weakening articulation in other cases. Second, it is not clear why the sound substitution happened only in the inlaut of the word, as Posti's example shows (**pata* > **padan*) but not also in the anlaut (for instance, **pata* > **fadan*). Third, it has been questioned why the Finns could have learned the voiced fricatives but not the unvoiced fricatives.

Another argument that must be considered is that in Posti's time, the mainstream view was still that VL operated after Grimm's law (fricativization of original voiceless stops). VL, however, is problematic because it is based on original IE stress patterns, but the stress was already fixed on the first syllable early on in Germanic. Therefore, some linguists (Koivulehto and Vennemann, p. 172-174, R. D. Fulk, 2018, p. 111) have proposed that VL actually preceded Grimm's law. Therefore, the stops would have been voiced before they were fricativized.

Another scholar who has questioned Posti's superstrate theory is Petri Kallio (2000), who pointed to the possibility of considering various extinct source languages. In other words, the question to ask is, in the case of such a sound change in the Finnic language, whether any evidence can specifically prove a substrate of pure Germanic origin, since there could also have been unknown substrates from unknown languages spoken at that time. Another aspect that has been mentioned is that as the consonants underwent various changes, the vowel system hardly changed. Therefore, it would be interesting to examine why Finnic consonants were apparently difficult for Germanic speakers to pronounce, whereas Finnic vowels did not cause any difficulties. Additionally, since CG also appears in Samoyedic languages without any Germanic influences, it is quite possible that it could have operated on the same basis for the Finnic languages without any foreign substrate influence.

3.1.3 Proto Finno-Saamic heritage

One of the earlier scholars in favor of CG being a Proto-Finno-Saamic innovation was K.B. Wiklund. However, he did not use the term “CG” back then and instead described this phenomenon as *Schwächungserscheinung*. In both of his articles “*Laut- und Formenlehre der Lule-Lappischen Dialekte*” (1891) and “*Entwurf einer urlappischen Lautlehre*” (1896), he proposed the *Schwächungserscheinung* of the consonants *k*, *p*, *t/kk*, *pp* and *tt* with *g*, *b*, *d*, *k*, *p* and *t* to be a common Finno-Saamic feature. Later, when Saami and Finnic became differentiated, the *Schwächungserscheinung* developed in different directions.

Knut Bergsland (1946) was another scholar investigating CG, although he was not in favor of the CG originating in the Proto-Finno-Saamic language. Because of the lack of CG in Southern Saami, he assumed that the Saami gradation was a recent Finnic influence due to language contact. However, in his article “*L’alternance consonantique date-t-elle du lapon commun?*” that was published in Konrad Nielsen’s jubilee publication, he distinguished between phonetic and phonemic CG. According to him, the original CG was purely a phonetic phenomenon.

Considering this statement, Paavo Ravila (1951, 1960) has examined this topic further and shed light on the methodical understanding of CG. As a result, he proposed that CG, as a phonetic phenomenon, originated in the Proto-Finno-Saamic language: “*dagegen halte ich den phonetischen Stufenwechsel [...] für urfinnisch-lappisch*” (p. 287). Additionally, he offered a plausible reconstruction of the possible participating consonants in Proto-Finno-Saamic CG.

To understand the CG, Ravila examined its mechanisms in contemporary Saami languages and dialects. If the CG in contemporary Saami and Finnic languages is a result of a common source, then the contemporary languages should evince at least some clues

that could lead to a common course. CG as a pure phonetic phenomenon must be understood in the sense of balancing different variants of the same phoneme, which could easily have taken place under the influence of a different pronunciation. The phonetic impact would have faded without leaving any visible trace, while the phonemic impact, in contrast, would have left traces on the later diverged languages. When the CG occurred, the sound relations were different than they are today. Similarly, in Proto-Finnic, the initial weak grade only appeared before an originally closed syllable, while the strong grade appeared before an open syllable. This behavior no longer operates in the same manner. As a result of different sound changes, many originally closed syllables have become open, and vice versa.

In every Saami language that has CG, it involves (almost) every consonant, in contrast to Finnic, where only stops alternate. This peculiarity led to the idea that the CG in the Saami languages must have arisen in a time when all of the Saami languages were close enough to each other and likely formed a common language. Therefore, it is unrealistic to assume a later Finnish influence on every Saami language separately. One of the pieces of evidence Ravila presents is a peculiarity common only to the eastern group of the Saami languages. The sibilants in the weak grade exhibit either a voiced or half-voiced fricative—for example, SaaI *pōššqō* : *pōzqm* (in comparison with SaaN *bāssât* : *bāsám*). Therefore, this difference between Eastern and Western Saami (which North Saami belongs to) reflects that CG developed differently in the eastern and the western languages as each group evolved in its own direction.

However, the case of South Saami, in which CG does not operate, may be problematic. All of the contemporary Saami languages are daughter languages of the common Proto-Saami language, and according to Ravila, the CG was already operating in the Proto-Saami language. Based on early research, no (pre)historical features allowed scholars to conclude an early separation of South Saami from the rest of the linguistic community, which could offer a plausible explanation of the absence of such a common feature. On the other hand, it was assumed that, due to the peripheral location, the Southern Saami

were limited in participating in common developments. However, according to newer research (Piha, 2019), it is quite possible that the (pre)historical tribes, known today as the speakers of South Saami, separated early from the rest and arrived in Scandinavia through the Baltic Sea. It can thus be speculated that CG did not develop in South Saami the same way as in its sister languages because South Saami did not offer such favorable sound changes, so that CG could take diverse directions in its further development.

The CG in Proto-Finno-Saami might have been the following:

kk : k̃k	k : k̃
lkk : lk̃k	lk : lk̃
	p : p̃
	t : t̃
	k : k̃

(The reconstruction according to Ravila, 1951,1960, Korhonen, 1988)

The Proto-Finno-Saamic plosives have weakened intervocalically after stressed syllables and after a voiced consonant in a closed syllable. It is also possible that affricates and sibilants participated in gradation. Then, the possible reconstruction would have been as follows: *ćć : čč, č : č̃, s : š...*

3.1.4 Saami-Samoyedic connection

Y. H. Toivonen also contributed to the search for the origin of the CG. In his works “Protolapin ongelmasta” (1946) and later “Zum Problem des Protolappischen” (1950), he discussed the problem of the origin of Saami and its position within the Finno-Ugric language family. However, his research was highly influenced by anthropology, so that his statements considered the racial differences between the Finns and Saami.

Based on this assumption, Toivonen concluded that the ancestors of the Saami and Finns must have spoken different languages. Similar to Wiklund (1896), Toivonen was in favor of a language shift, so he proposed that the Saami adopted the language of their southern neighbors. Then, he began to discuss the question of “Proto-lappisch” and concluded that the Saami must have originally spoken a Samoyedic language. His arguments were based on facts such as the presence of dual among the Saami languages and its absence in the Finnic languages, which, on the other hand, is used in Samoyedic languages. Then, another argument was the Saami vocabulary of old inheritance, which has counterparts in Ob-Ugric as well as in Samoyedic languages.

One of the crucial arguments he presented for his theory was the CG.

Toivonen first shed light on the differences between the mechanisms in both language groups. In the Finnic languages, only short stops or geminates as well as individual consonant combinations are generally subject to the alternation. On the other hand, in Saami, the alternation occurs in all consonants, and the number of vowels in the first and second syllable and the number of consonants between the vowels of the first and second syllable are mutually dependent. Additionally, there is an alternation of consonants operating in individual Samoyedic languages, such as Nganasan and Khanty. This coincides, to some extent, with Finnic and Saami CG. Therefore, according to Toivonen, the CG could be characterized as an inherited peculiarity from their original Samoyedic homeland.

Later, as Saami and Finnish were exposed to strong language contact with each other, the CG would have penetrated from Proto-lappisch into Pre-Finnic.

3.2 Labial vowel in non-initial syllable

The Proto-Finno-Saamic vowel system (see Section 2.3.1) consisted of 11 vowels in the initial syllable, and the 4 vowels **e*, **o*, **ä* and **a* have been reconstructed for the non-initial syllable. However, it must be noted that the quality of **e* or **i* has often been discussed. Based on the absence of **o* in previous language stages, this labial vowel seems to account for a possible innovation of the common Proto-Finno-Saami language. Both the Finnic and Saami languages possess words in which the labial vowel in a non-initial syllable appears—for instance, *pysy-* : *bissu-*, *aiko-* : *äigu-*.

3.2.1 An innovation?

According to E. Itkonen (1954), the labial vowel **o* developed from a fusion of the old stem vowels **a*, **ä* and **e* with a suffixal labial consonant, **v*. The development of these different combinations into the labial vowel in Proto-Finno-Saami would have been as follows:

**ev* > **eu* > **ū* > **u* : in words containing a back vowel

**ev*, **äv* > **eü*, **äü* > **ū* > *ü* : in words with a front vowel

**av* > **au* > **ō* > *o* : in nominal derivatives

**av* > **au* > **ū* > *u* : in verbal derivatives

The labial vowel could account for a common innovation, since, according to Itkonen, the fusion of the labial consonant **v* must have happened only after the Proto-Finno-Mordvinic stage, due to its reflection in passive-reflexive derivatives in Mansi and Mordvin (PFM **näke-v* > MdE *nejav* and in comparison with Fi *näky-*).

Once the labial vowel was fully established in the Proto-Finno-Saamic vowel system, it could extend its presence beyond the original *v*-derivates. Additionally, the labial vowel must have existed before the separation of the Finnic and Saami languages because, for instance, in some types of word pairs, such as *pato* : *buodđu* < **paðo*, *puhua* : *bossut* < **pušo-*, *kutsua* : *gohččut* < **kućóo-*, the consonant system does not refer to borrowings between the languages but more likely to a common original form.

Then, based on the work of E. Itkonen, the paradigm of labial vowels in non-initial syllable of Proto-Finno-Saami would have contained three different labial vowels: **o*, **u* and **ü*. However, according to Korhonen (1981:98), the second syllable vowel paradigm contained just one labial vowel, namely **o*, from which later in Late Proto-Finnic **u* and **ü* would have gradually differentiated.

Another argument supporting the presence of only one labial vowel is based on the fact that different labial vowels in non-initial syllables in Saami derive from one single Pre-Proto-Saami vowel with conditioned sound changes.

T. Lehtisalo (1936) and B. Collinder (1945), on the other hand, offered a different explanation for the labial vowel. It was apparently possible in Proto-Uralic to combine the labial suffix **β* + **-u*, which possibly merged later, in Late Proto-Uralic, into a labial vowel. This argument was mostly supported by its presence in certain words and suffixes, which occur in several Uralic languages. Therefore, it was appealing for Lehtisalo and Collinder to suggest a common Uralic origin. However, this PU origin contradicts the above-mentioned argument from E. Itkonen that the fusion of the labial consonant must have taken place only after the Proto-Finno-Mordvinic stage.

Other scholars, such as P. Ravila (1935) and T. Itkonen (1997), have suggested another

explanation for the appearance of the labial vowel in the non-initial syllable in both language groups. During the Proto-Finnic stage, because of the sound change **aj* > **oj*, the frequency of the labial vowels multiplied. This change affected plural forms of nouns, preterite forms of verbs and many derivational suffixes—for instance, PFS **tala-j* > MPF **taloj* > LPF **taloi* > Fi *talo* (haus).

According to T. Itkonen (p. 237), the Saami languages did not experience such sound change. The noun-based diminutive nouns in Finnic *-oi-* and the noun-/verb-based verbs in *-oi* should have counterparts in Saami in the derivationally heterogeneous group of nouns showing **ōj* and **-ujē-*: for instance, SaaN *æno* : *ednu-*, SaaL *ännui* (maternal uncle), Fi *eno(i)* or SaaN *oidnut* : *oidnujik* (to be seen). Therefore, the labial vowel in a non-initial syllable in Saami could have been mediated on the basis of Finnic loan influence.

Additionally, some remarks have been made concerning the geographical distribution of old stems. For instance, an illabial vowel has been preserved in South Estonian, North Estonian and Livonian, whereas most Northern Finnic languages and the Saami languages show a round vowel and a partly illabial vowel—for example, *čuožžot* (to stand) and *godđet* (to weave). Therefore, the labial vowel in this case would seem to be incompatible with a common proto-language.

In contrast, P. Sammalahiti (1999) argues that Saami passive verbs undoubtedly come from the same source as the Finnish automatic passive containing **-u-*, and, for this reason, its combination with the Finnish *oi-* frequentatives is unnecessary. This can be explained as a natural preservation of *v* after the accented vowel: in the weightless position, the fusion of vowel and *-v-* produced the sequence of the labial vowel and *-j-*, and in the accented position, *-v-* caused the labialization of the previous vowel but remained labial itself. Therefore, the Saami passive marker has two significantly different features, namely **-Oj-* and **-Ov-* (*O* = labial vowel).

This explanation of verb morphology is supported by what is known from old **oj-* nouns, which usually seem to require an older *v*-body (for instance, **käläv* > *käly*, **na-*

tav > *nato*, **pajiv* > *paju*, **vāniv* > *vävy*). The Saami **oj*-nouns are the successors of these old *v*-stems, with the exception of the above-mentioned example by T. Itkonen *ānui* - *eno(i)*, for which no explanation can be found.

Additionally, other Saami *o*-nouns correspond to Finnish *o*-nouns, and they have experienced the same half-vowel loss as the automatic passive conductor *-u/y-*. Therefore, the Saami **oj*-stems cannot be explained on the basis of Finnic loans either. There are many examples of labial vowels in non-initial syllables in Saami that are independent from the sound change **ai* > **oi* in Finnic syllables. Therefore, it seems reasonable to assume its appearance in a common Proto-Finno-Saamic language rather than as a loan.

In two studies, J. Kuokkala (2012, 2018) provided a comprehensive analysis of all of the suggested Finno-Saamic cognate pairs⁶ showing a labial vowel in a non-initial syllable to investigate if it was possible to reconstruct a Proto-Finno-Saamic form containing this labial vowel. The first study analyzed 75 suggested Finno-Saamic cognate pairs. Over half (39 pairs) of the total pairs were either fully or conditionally acceptable candidates with a labial vowel. The rest (36 pairs) suggested cognate pairs were rejected.

In his second study, Kuokkala analyzed 74 words, of which 27 had a verbal stem, 42 words had a nominal stem and 5 had both variants. From the 74 words, he found that 34 words could be traced back to a common source, 16 words were the result of common inheritance, 9 words had a cognate stem containing a secondary labial vowel, 17 words were loanwords from Finnic into Saami and vice versa and 5 word pairs possibly resulted from parallel developments. From all of the analyzed Finno-Saamic cognate pairs possessing a labial vowel in a noninitial syllable, 46% could be traced back to a common source. Thus, the majority of the suggested cognate pairs did not demonstrate signs of possible common inheritance; however, there is still an acceptable number of lexical

⁶ All the suggested Finno-Saamic cognate pairs analyzed in the study of Kuokkala (2012, 2018) were based on SSA (Suomen sanojen alkuperä. Etymologinen sanakirja, E.Itkonen, Kulonen 1992-2000).

items with diverse morphological and morphosyntactic word classes that possibly fulfill the criteria for a common origin. However, further study is needed.

3.3 The loss of initial *v before a rounded vowel

The last phonological innovation of Proto-Finno-Saami seems to be the loss of an initial *v before a rounded vowel. E. Itkonen (1969:102) has been among the first scholars to remark that the reconstructed word *vuδ'e (new) is reflected differently in the Saami *ođđâ*, Mordvinic *od* and Finnish *uusi*. In comparison, the Finnish long *uu* form might have resulted from a vocalization of the previous *v; however, the Saami word seems to be a regular outcome. Therefore, it is reasonable to assume *v was preserved in the previous proto-form.

According to Korhonen (1981:131-132), the different comparisons and reflections of words containing *v among other Uralic languages indicate that the loss of initial *v must be a Finno-Saamic feature. Examples include SaaN *oal'ge*, F *olka*, Hu *váll* (shoulder) or Saa *âđâ*, Fi *ydin* (< PFS *üðem), Mord *ud'ime*, M *βim/βem*, Ko *vem*, Votj *vim/vijim*, Ostj *uēļam*, Vog *βelam*, Hu *velõ* (< PFU *vüðem) and Saa *âlâ*, Fi *ylä/yle-* (< PFS *üle-), Mord *vel'-*, M *βal-*, Votj *vil*, Ostj *el'*, Vog *äl* (< PFU *vüle). Based on the two last words, *âđâ* and *âlâ*, it can be said that the labial vowel had already lost its labiality in Proto-Saami because of the development of *ü > *e > *â. It also indicates that the loss of *v already took place in an earlier stage and not after. From both words, the suggested reconstruction is PFS *üle-, in comparison with an older FU stage, *vüle.

There are also words in both Finnic and Saami languages in which *v has been preserved—for instance, Saa *vuollât*, Fi *vuolla*, Ko *volavnis*, Votj *vēļinj*, Ost *uāl't-*, Vog *βalt-* (< PFU *vōle). It is quite possible to have had the loss of *v before a long *ō, but it likely appeared again when followed by *ō. On the other hand, it could be argued that *v never disappeared when followed by a long *ō.

On the contrary, even though the loss of **v* seems to be a phonetically natural and seemingly uniform phenomenon in both Finnic and Saami, T. Itkonen (1997) suggests a separate development in the two language branches. His argument rests on the fact that the Southern Finnic languages still possess an initial *v* before a short labial vowel. In particular, see the verb for “to take” (its cognate in Finnish is *ottaa*): Vot *veṭtā*, Est *võt-ta*, Liv *veṭtə*. An explanation for this difference is that the loss of **v* was blocked by an early sound change *o* > *e*⁷, which affected several words in southern Finnic.

T. Itkonen’s two examples do not have any exact cognates outside of the Finnic area. Therefore, it is probable, based on his arguments, that the phenomenon was a Proto-Finnic innovation rather than it being from a common origin. Considering the strength of the argument, there are many more examples showing the loss of **v* that could account for a common Proto-Finno-Saamic innovation. According to Sammallahti (1999:73), the situation can be described as *argumentum ex silentio*.

⁷ According to E. Itkonen (1945, p. 181-182), the sound change *o* > *e* might be a reflexion of an articulation error that has occurred during the formation of a new vowel category between the front and back vowels in the ancestral phonetic system. During the process, the back vowel *o* has tended towards the new sound *e*, which is also its closest back vowel. Then this tendency persisted and the *e* began to spread at the expense of the *o* and sometimes even the *a*.

IV. Morphological arguments

This fourth chapter is dedicated to all of the morphological arguments, which are comprised of markers: comparative, imperative, conditional and infinitive. Each section defines each phenomenon and then analyzes the extent to which it can or cannot account for a common Proto-Finno-Saamic innovation.

4.1 The comparative marker

All of the Finnic languages have a comparative mood marker that could have been in their common Proto-Finnic language, **-mpA*, with the exception of Livonian, in which the comparison is expressed with analytical constructions (Laakso, 2001). The stem *-mp-* is also found in the Finnish superlative form *-impa/impä- : -imma/immä-*, and it is considered to be caused by a comparative analogy: for instance, in Finnish, *iso* (big), *isompi* (bigger), *isoin* (biggest) or, when declination is needed, *kauimpana* (furthest + ESS) and *lähempää* (closest + P).

In Saami, the comparative mood marker is either *-b* after a vowel of an even-numbered syllable or *-b'bo* after an odd-numbered syllable. The superlative marker is *-mus* in the case of an even syllable and *-mos* after a vowel of an odd syllable: for example, *nânos* (firm), *nânnusâbbo* (firmer), *nânnusâmos* (firmest) or *nuorrâ* (young), *nuorrâb* (younger) *nuorrâmus* (youngest). The Saami comparative marker can be reconstructed as **mbō* and returns to a labial vowel.

Thus, the reconstructed comparative mood marker of Proto-Finno-Saamic appears to be **-mpV* (Korhonen 1981, Ylikoski 2018).

Additionally, regarding the Finno-Saamic marker **-mpV*, it seems to have an interesting

corresponding functional equivalent in Hungarian, *-bb*: for instance, SaaS *orrebe* (newer), Fi *uudempi* (: *uudempa-*) and Hu *újabb*. The phonetic differences in the markers *mpi* and *bb* may be explained as regular developments, such as a denasalization and voicing of **mp* into *bb* in Hungarian, then a raising of the final vowel **a* > *i* in Finnic. In Saami, the stem vowel *u* (< **o*) in the oblique form is not exactly regular. A regular shape of **-mpA* can, however, be found in SaaS *mubpie* (other, second < **mubbe* < **muu-mpA*) from the pronoun **muu* (other) (Korhonen 1981: 246).

However, the similarities between these comparative mood markers of two geographical extremes of the Uralic family are not considered to be of common origin, since no full consensus of possible cognates of these suffixes can be found in other branches of the language family (Ylikoski, 2018, p. 7). Thus, the similarities seem more likely to correspond to a convergent development between these branches.

According to Janhunen (2018), the general agreement on this topic, due to the presence of a similar comparative marker in the westernmost branches and Hungarian (which was originally in the east) and its absence among the other Uralic languages, is that the marker can be reconstructed as a feature dating back to Proto-Finno-Ugric. Based on this argument, the search for the comparative marker's nature has been mostly focused on its origin as an older phenomenon (Ramstedt 1917, Fuchs 1949, Raun 1949) rather than in the Proto-Finno-Saamic stage.

One of the earliest scholars to examine the comparative marker was P. Ravila (1937), who (indirectly) suggested a Finno-Saamic origin for the marker. According to him, the Finnic, Saami and Hungarian markers are parallel developments, which have developed from a presupposition in a previous common language stage. From this, it can then be speculated that the **-mpA* marker had a different function in an early stage of the language and that later during the Proto-Finno-Saamic stage it assumed the function of a comparative marker..

4.2 The imperative marker

The imperative mood is used to issue a command, make a request or explain what needs to be done. To cover the imperative in every language of both groups, it can be described based on their previous language stages, Proto-Finnic and Proto-Saami.

The Finnic imperative marker contains the *k* element. The second-person SG appears in most Finnic languages as $\emptyset$ ($< *k$), which means there is no marker. The first-person PL also has the person ending; however, in colloquial Estonian, Ingrian, Votic and Finnish, the person ending is replaced with an indicative form. The second-person PL is built with **kA* or **kO* together with the suffix **tA* or **te*. The third person is formed with **kA* or **kO* and the suffix **hen* (Laakso, 2001): for instance, Fi *Lue kirjaa!* (IMP.2SG ~ Read the book!), Est *lugege!* (IMP.2PL ~ read!), Est *loeme!* (IMP.1PL ~ read!) and Fi *lukekoot* $< *lukekohen$ (IMP.3PL ~ may they read!).

The formation of the imperative in the Saami languages rests on five reconstructed suffixes. The first is **-ô-*, which appears in the first and third person in even-numbered syllable. The second, **-k*, is used for the second-person singular. The third, **-kô-*, appears in the first and third person in odd-numbered syllables. The fourth marker **-kē-* is used for the second-person dual and plural in odd-numbered syllables. The last reconstructed marker is **-Ø*, which appears in even-numbered syllables in the second-person plural and dual, to which only personal endings are attached to form the second-person dual and plural imperative (Korhonen, 1981, Sammallahti, 1998): for instance, SaaN *mana!* (IMP.2SG ~ go!), SaaN *mutalehkku!* (IMP.1DU ~ “you two” tell!).

The Saami marker **-kē-* has its historical counterpart in the Finnic **-kA*. According to Korhonen (1981:258) and Sammallahti (1999:73), the imperative mood marker **-ka/-kâ* could be considered as a Proto-Finno-Saamic innovation. The explanation for this is that

they might have arisen analogically by following the model of the present indicative 2SG *-t* and 2PL *-ta, -tä*. When there was, for instance, in the present indicative in 2SG *ajat* : 2PL **ajata* and the imperative, then 2SG **ajak* was obtained accordingly from 2SG **ajak* : IMP.2PL *ajaka*.

Additionally, the Saami **-kē-* (which appears today in Northern Saami as *-kke* and *-kki-*) does not have any other counterparts besides the mentioned one in other Uralic languages.

4.3 The conditional and potential marker

The conditional mood serves to express politeness, wishful conditions, requests and the unreality of a proposition. Additionally, this mood can be used as a conjunctive function in subordinate clauses and to express the future in subordinate clauses (Laakso, 2001).

In the Finnic languages, the conditional is formed with the marker *-isi-* in Finnish, Karelian, Votic and Veps. Other languages, such as Estonian and Livonian, form the conditional with the *-ksi-* marker. The Finnic languages essentially possess two markers. Some examples of the conditional marker are Est *Oleks mul ainult raha!* (If I only had money) or Fi *tulisin, mutta minulla ei ole aikaa* (I would come, but I don't have time).

The conditional mood in the Saami languages has also two markers, *-š-* and *-vč-*. Both markers are considered to have developed from a diminutive-frequentative verbal derivative: for instance, *livččen oastán* (I would have bought) or *muitalivččen* (I would tell).

A potential mood as a verbal category expresses uncertainty or the probability of an action.

In the Finnic languages, it is formed with the inflectional suffix *-ne-* in the present tense. The past tense as well as the preterite participle have the auxiliary verb *lie-*. Even though the use of the potential mood is still fairly common in certain varieties of spoken

as well as written Finnish⁸ and Karelian, it has generally decreased in most Finnic languages. For instance, in Livonian and Estonian this mood is completely extinct. In Veps and Southern Estonian, it is used rarely. A few examples to illustrate the potential mood are Fi *tullee* (s/he will probably come) and Fi *Eikö tuo antane* (s/he will probably give). In Saami languages, the potential mood, besides expressing expectable events, is sometimes used as a way to indicate a future form⁹. The markers are *-ž-*, *-žž* and *-čč-*. Similarly to Finnic, the potential mood in Saami distinguishes between the present and perfect tense. In North Saami grammars, this mood is called the dubitative mood (Aikio, Ylikoski, 2009-2010). Some examples to show the use of the potential marker are SaaN *Mun vuosšan gáfe, jugažehpet dahje ehpet* (I will cook coffee, no matter whether you will drink it or not) and *viežžabeahhti* (you two fetch: 2DU).

Both potential and conditional markers are handled together since it is quite possible they are historically connected to each other. Based on Korhonen (1981:252), the Proto-Finno-Saamic potential marker could have been either **-ŋś-* or **-nć* (and it phonetically appears as **-ŋ(í)ś-*). Additionally, it corresponds in terms of pronunciation to the Finnish conditional marker *-is-*, for instance with *tietäisin* (I would know).

Another interesting observation is that the Saami potential marker and the Finnish conditional marker seem to be identical with the diminutive suffix **ŋće*: for example, SaaN: *bæi've: bæivaš : bæivaža* or Fi *päivä: päiväinen : päiväisen* (day/sun). According to Korhonen, the mentioned Finno-Saamic markers could have originated in the diminutive stems, since in the Uralic languages many suffixes are associated with nouns and verbs, and such parallelism is derived from a common origin.

The conditional marker of Proto-Finno-Saamic can be reconstructed as **-kś-* or **-kć-*. Still, the contemporary Saami potential marker *-ks-* shows visible correspondence with Estonian and Livonian, for instance with Est *tuleksin* (I would come). An early scholar who examined the origin of the conditional marker was E.N. Setälä (1886), according to

⁸ The strongest use of the potential mood is in Finnish and especially in the eastern dialects.

⁹ The Saami languages, as well as the Finnic languages do not have a future tense.

whom both conditionals arose from frequentative verbs, for instance SaaN *vāzzāšit* (to walk) or Fi *uiksenella* (to swim), in which the *-š-* and *-ks-* would return to a common **-kś-*. Setälä considers the original markers to be the ones present in northern Estonian dialects and Livonian, such as *saiksin*, *pidiks* and *tuliksin*, which show the conditional as *-iksi-*. Then, from this marker, **-jsi-* formed, which later changed to *-isi-*.

P. Ravila (1935), on the other hand, claimed that the conditional *-isi-* is based on the nominal diminutive derivate *-ise-*, which occurs in the stem of Finnish diminutive nouns such as *kalase-* and *poikase-* (< **kalaise-*, **poikaise-*). The marker returns to the Proto-Finno-Saamic form **-ŋ(ʔ)ś-* from which also would have formed the potential marker *-žž-* in Saami. According to Ravila, it is understandable that the uncertain action that was intended as possible, as expressed by the subjunctive, would be reproduced by means of a diminutive suffix.

Ravila has also considered it possible that the Finnic *-ksi-* conditional would be of the same origin as the *-isi-* conditional. The origin of the *-isi-* suffix in Proto Finno-Saamic would have been **-ŋś-*, from which **-ŋkś-* would have been obtained. The consonant *k* would have appeared sporadically as a homorganic stop between the nasal *ŋ* and the sibilant *ś*. Later **ŋ* would have disappeared before the consonant group **kś* would have formed. This could account for a reasonable explanation how two phonetically distinct, but functionally similar markers of the conditional mood would have developed.

Later, M. Korhonen (1981) explained that the Finnic *-isi-* conditional and the Saami potential marker developed from the Proto-Finno-Saamic derivate **ŋć*, which he assumed to be an instantaneous diminutive. This derivate would then appear at the ends of momentaneous verbs in Finnic, such as *-Aise-* and *-Aitse-*, for example in the Finnish verbs *kiskaisen* (I plug) and *käväistä* (to make a short visit).

Korhonen also questioned Ravila's statement regarding whether the consistent and deep distribution of the Finnic and Saami **ŋś* and **kś* original markers and verb derivatives was based on Proto-Finno-Saami phonetic and functional differentiation.

Following Ravila's explanation, it must be assumed that both markers have been used throughout the Proto-Finno-Saami-speaking area and that the current distribution of Finnic emerged later. On the other hand, both markers are not older than the Proto-Finno-Saamic phase, so it would be strange if, in the common language, these two markers carrying the same meaning would have arisen and later have become partially lost.

T. Lehtinen (1983) has approached the origin of the conditional marker from the perspective of morphological and semantic motivation. According to him, the Finnic *-is-* conditional marker has evolved from the *-ise-* frequentative derivate, whose representative appears in the Finnic *helisee* and *värisee* expressive verb types. Lehtinen believes that this *-is-* marker was much more frequent earlier, than at present, and it expresses repeated, continuous, planned and desired actions as well as events and actions that are only planned to take place in the future. Thus, the derivate did not only express frequency and durativity but also carried a futuristic meaning. Lehtinen mainly based his theory on three observations. First, the Finnic *-ksi-* marker and the Saami *-xč-* conditional marker can be traced to the Proto-Finno-Saamic **kś-* derivate of frequentative verbs, so it is also expected that the *-isi-* conditional would have evolved from frequentative verbs. In addition, *l-* conditionals, which are based on *l-* frequentative verbs, are found among some Saami languages. Second, Lehtinen presents the observation that a derivate that has become a mood marker tends to disappear from the actual derivating system. This has happened in Estonian, where a frequentative derivate corresponding to the *ksi-* conditional no longer exists. Thus, efforts have been made to drop the frequentative derivatives corresponding to the potential marker of Saami and the Finnic *-isi-* conditional marker. In Saami, the disappearance of this derivate has been complete, and in Finnic languages the derivate often no longer occurs, only in expressive verbs, such as the mentioned *helisee* and *värisee*, which could not have acquired a modal meaning, because they are rootless. Third, the continuity of frequentative verbs is a universal tendency. Based on this, Lehtinen interprets the current *helisee* and *värisee* continuative verbs of Finnic as remnants of verb derivatives in **-ŋće-* that still existed in Proto-Finno-Saamic

and from which the Finnic *-isi-* conditional marker and the Saami potential marker may have developed.

T. Itkonen (1983) has suggested that the suffix of the Proto-Finno-Saamic conditional specifically would have been **kś*. The direct reflexes of this suffix would be the *ksi-* conditional of the Southern Finnic languages and *xč-* for Saami. In addition to this, there would be a **ǵć-* type subjunctive or similar mood in northern Proto-Finnic, which later would have penetrated into the northern group, replacing the original *ks-* conditional. According to Itkonen, the *ks-* conditional had to disappear from the northern group because of the existence of *ks-* derivatives of frequentative verbs. This avoided a certain homonymy that would have been caused by the presence of the same suffixes.

Based on Lehtinen's theory, it could be said that a productive **ǵće-* frequentative system occurred in Proto-Finno-Saamic. However, there do not appear to be any signs of it in the current Finnic languages. It is also questioned whether the current *helisee* and *väri-see* types are remnants of the frequentative verbs of Proto-Finno-Saami, because according to E. Itkonen (1966), it is generally believed that expressive words belong to the late stratification of language. Therefore, Finnic verb types such as *helisee* and *väri-see* have not been able to develop into the conditional mood marker *-is-* as Lehtinen (1983) has pointed out.

Itkonen's theory assumes that a conditional *ks-* marker also appeared in northern Finnic and would then have been suppressed by the corresponding type of frequentative derivatives. However, Lehtinen's theory, on the other hand, can be questioned as to whether the *ks-* frequentatives of northern Proto-Finnic would have been able to suppress the entire established grammatical category of the *ks-* conditional.

4.4 The infinitive marker

According to Ylikoski (2003), an infinitive is a subcategory of non-finite verb forms. Participles, converbs and action nominals can also be found under this category. Finnish and North Saami (and Erzya Mordvin) possess several distinct infinitives. While in the Finnish grammatical tradition the term “infinitive” is used for various non-finites, of which some could be better called converbs, in Saami languages they are specialized for complement functions. In North Saami, there are two infinitives, *-t* and *-mis/-mes*. In Finnish, there are possibly three true infinitives: *-mAAn*, *-mAstA* and *-tA* (p. 213).

Based on contemporary Finnic languages, it has been possible to reconstruct the infinitive marker present in their common Proto-Finnic language. This group of languages has two infinitive forms. The first one corresponds to **-tA-* and the second one to **-mA-*.

The Saami languages allow scholars to reconstruct the infinitive marker of the common Proto-Saami language as **-dēk*. Both markers, **-tA-* and **-dēk*, are generally considered cognates.

The infinitive marker **-tak/-täk* seems to be a common Proto-Finno-Saamic innovation (Korhonen 1981, Sammallahti 1999), which consisted of an ancient verbal noun in **-ta* followed by a directional lative case with the ending **k*. Korhonen (p. 289) noticed that the Selkup language has the same type of infinitive, for instance *ém^{da}* (Fi *imeä* : to suck); however, he does not consider it as an argument supporting a Proto-Uralic origin. In both cases, Finno-Saamic as well as Selkup, the basis for the emergence of the infinitive marker might have been same: the **-tV-* derivate verbal noun.

T. Itkonen (1997:241) has pointed at an exact cognate of the marker in Khanty; however, he considers it as a parallel development. The south Khanty markers are *-ta*, *-da*,

-tai and *-dai*, as mentioned in Lehtisalo (1936).

The infinitives of most other Uralic languages have been formed according to the same principle. The reason for this is that most of the verbs to which the infinitive is associated require a result of attribute: for instance, Mord *palams* (to kiss), Ma *kandaš* (to carry), Ko *munni* (to go) and Hu *várni* (to wait). As the infinitives in **tA* only occur in Finnic and Saami, it is reasonable to believe that they are a possible shared innovation.

V. Syntactic arguments

Finno-Saamic syntax can be described as peculiar, in the sense that it differs in many respects from that of other Uralic languages. In Section 2.3, which was dedicated to the syntax of Proto-Finno-Saami, four characteristics have been mentioned: the word order (SVO), copula, agreement of adjective modifiers and conjunctions.

According to M. Korhonen (1981:342), it has not been definitively clarified to what extent common syntactic characteristics can account for common innovations or whether this is due to subsequent influence between Finnish, Saami and neighboring languages. In this chapter, I first briefly describe the syntactic phenomena at issue and then (in Section 5.5) analyze the arguments for or against their common Finno-Saamic origin.

5.1 Agreement

According to *Iso Suomen Kielioppi*¹⁰, agreement (fi. *kongruenssi*) is the grammatical consistency of words and phrases that belong to the same construction. The inflection categories involved in agreement are location, numerus and person. Concerning sentences, agreement occurs between the subject, the predicate verb and the predicate, and in compound verb forms.

This feature separates the Finno-Saamic languages from the rest of the contemporary Uralic languages, since they are the only branches of the language family that have developed a new type of attribution device. Most of the contemporary Uralic languages

¹⁰ *Iso Suomen Kielioppi* (eng. Comprehensive Grammar of Finnish, 2004) describes the structure and use of Finnish. It is a descriptive grammar and it is also available online. (<https://kaino.kotus.fi/visk/etusivu.php>)

lack agreement of adjective modifiers. This feature can be characterized as juxtaposition. According to Rießler (2016), juxtaposition means that in an unmarked sequence of phrase constituents, a constituent is syntactically subordinated to the other (p. 29): for instance, Ung *új ház* (new house) : *új házban* (in a new house + INE). In comparison, the Finnish equivalent without total agreement would be *uusi talossa*. However, due to the total agreement, it is *uudessa talossa* or, in an example from Komi-Zyrian, *džid kar* (big town) with the comparison *idžid karjas* (big towns).

Therefore, the lack of agreement of adjective modifiers represents the original state in the common Proto-Uralic language, in which anything other than the genitive attribute form was inflexible in front of its head word.

Both language groups, Saami as well as Finnic, show agreement, and the main difference lies in its function. The Finnic languages exhibit all head-driven agreement as the default type of attribution marking of adjectives (Rießler, 2016): for instance, Fi *iso talo* (big house, N.SG) ➔ *isot talot* (big houses, N.PL) ➔ *isoissa taloissa* (in big houses, INE.PL).

The Saami languages, on the other hand, possess only a partial type of agreement. This means that only a few adjectives, numerals and pronouns show regular agreement with the head noun when declined. For instance, in North Saami, the adjective *buorre* (good) and *baha* (bad) participate regularly in agreement. This can be illustrated with the example SaaN *buorre manna* (good kid, N.SG) ➔ *buorren mannan* (good kid, ESS.SG) ➔ *buriiguim manaiiguim* (good kid, KOM.PL).

5.2 Word order

In both contemporary Finnic and Saami languages, except for South Saami, the predicate usually appears ahead of its object, and therefore the prevalent word order can be characterized as SVO (subject-verb-object): for example, SaaN *Áhčči oinnii Niillasa* (the father saw Niila) or Fi *Jaakko juo teetä* (Jaakko drinks tea). On the contrary, the older common ancestor language Proto-Uralic has been reconstructed as having a different word order, namely SOV (subject-object-verb). This type of word order is still common among several Finno-Ugric languages (Korhonen, 1981:342).

South Saami, however, often shows an SOV word order. This exception has been discussed further in Vilkuna (1997), in which this word order is proposed as possibly being an archaic variant with no particular function. This SOV word order is applied in South Saami since negation, tense auxiliaries and modal verbs take the medial position in the language. T. Trosterund (1996) has also reported SOV as a prevalent word order coming from South Saami speakers born in the 19th century.

5.3 Copula

Among most of the contemporary Uralic languages, the nominal predicate is related to the subject without the need to use the verb “to be” (fi. *olla*) unless it is necessary to express tempus or modus. For instance, Hu *a ház új* (the house *is* new). In comparison with Finnish, the same sentence would be *talo on uusi* (the house *is* new). This feature, the lack of copula, also operated in the Proto-Uralic language.

Among some Saami languages, however, such as South Saami and Ter Saami, there is still a lack of copula: for example, SaaS *dihthe boâries* (s/he *is* old). Apart from this exception, the copula occurs as a predicate, and from the nominal predicate came a predi-

cate: for instance, SaaN *dallo læ odas* (the house *is* new).

5.4 Conjunctions

The last syntactic feature mentioned by Korhonen (p. 346), common to Finnic as well as to Saami, is conjunctions. Apparently, the Proto-Uralic language did not use conjunctions, and therefore coordination in a sentence was expressed asyndetically, which means without conjunctions or with different constructions.

For instance, Fi *poika nukahti kirjaa lukiessaan* is a sentence with its construction based on a verbal nominal form. But, by using a conjunction, it could be said as *poika nukahti, kun hän luki kirjaa* (the boy fell asleep while reading a book vs. the boy fell asleep, when he was reading a book). The construction based on a verbal nominal form is preferred in most Uralic languages.

The Finnic languages, Finnish, Estonian and the Saami languages have similar conjunctions: Fi, Est, Saa. *ja* (and) and Fin. Saa *vai* Est *või* (or). However, in comparison with other contemporary Uralic languages, irregularities appear, such as Ma *den*, Ms *os* and Ko *da/daj/nji* (and). From this variety, it is clear that no unified system of conjunctions can easily be reconstructed.

5.5 Any common syntactic innovations?

It has been shown that agreement among the Uralic languages is mostly characteristic of the western branches (the Finnic and Saami languages). It would be indeed appealing to speculate first that the presence of agreement is another common innovation shared by these two language groups. However, the most accepted view is that

agreement is the result of language contact and influence rather than a genetic inheritance.

For example, Rießler (2006, 2016) offers a detailed explanation for the origin of the agreement present in both language groups. Finnic and Saami languages, together with their geographical neighboring languages Baltic, Germanic and Slavic, constitute a northern European “buffer zone” in which areal grammaticalization processes have emerged as an innovation due to constant language contact.

During this process, new attribution markings were grammaticalized from their original attributive appositional constructions. The process is, according to Rießler, most likely a result of contact with Proto-Baltic and Proto-Slavic.

The explanation is supported by the fact that the Finnic type of agreement, head-driven agreement, is also found as the prototypical marking in the (Proto-)Indo-European language family, while juxtaposition is prevalent among other Uralic languages (which are less exposed to contact with Indo-European languages).

Then, the development of agreement in Saami and the three mentioned Indo-European languages may certainly be connected on a structural level. The anti-construct agreement has evolved from an attributive apposition construction of attributive nominalizers, and, according to Rießler, the model languages, that influenced Saami, could have been more likely Proto-Germanic and Proto-Balto-Slavic.

The second common syntactic characteristic is the word order, which has been mentioned to be SVO, while most of the Uralic languages have preserved the original SOV word order. Interestingly, the same SVO order is also preferred in Hungarian, and therefore it is more likely to be a result of Indo-European influence.

Furthermore, the copula as well conjunctions in the contemporary languages can be characterized according to P. Ravila (1941:40) as loans in Finnish and Saami, which originates from Germanic. The copula in several other Finno-Ugric languages originates from Russian. Korhonen (1981:343) also ascribes these features to Germanic influence

and explains its penetration as being due to language contact, though Finnic obtained these types of loans first, and from Finnic, they diffused into Saami.

The different syntactic traits characteristic of the Finnic and Saami languages and, in other words, the syntactic characteristics that make these two language groups appear different from their Uralic sister languages can in most cases be explained as being the result of language contact with neighboring Indo-European languages rather than being common innovations.

VI. Lexical arguments

This sixth chapter examines specific Finno-Saamic vocabulary as well as loan distribution. As previously mentioned, the Saami examples originating in older literature are written according to K. Nielsen's orthography, while the newer examples are in standard orthography. The main questions that will be answered are as follows: Can a specific Finno-Saamic vocabulary be reconstructed? What can the similar loanword distribution in Finnic and Saami tell us? Additionally, difficulties of the etymological nativization when identifying the original PFS vocabulary are discussed.

6.1 Specific Finno-Saamic vocabulary?

One of the earliest scholars to search for a common Finno-Saamic vocabulary was T. Itkonen (1997), who attempted to find the number of word stems occurring only in the Finnic and Saami languages but nowhere else in the Uralic language family. To achieve the expected results, he needed first to separate the mutual recent loans that have occurred naturally due to intense language contact from words of common heritage.

However, this type of sorting may have caused complications due to the effect of the etymological nativization of loanwords (Aikio, 2007). Therefore, it made it difficult to distinguish original words from being early loans originating in either later differentiated languages of Saami or Finnic. In addition, Itkonen excluded words pointing to any foreign etymology, such as Indo-European, Germanic or Baltic.

Thus, Itkonen's list consisted of 98 Finno-Saamic words, in which the words containing

the “bubble” symbol (°) occurred only in the Northern Finnic languages¹¹ and those with two “bubbles” (°°) occurred also in the Votic and the Northeast dialects of Estonian¹².

1. Finn. *ahmia* ‘devour’, *ahma* ‘glutton’ ~ SaaN¹³ *vuosmes* ‘covetous of a certain food (a pregnant woman)’.
2. Finn. *ahven* ‘perch’ ~ SaaN *vuosko* : *vus kun-* id.
3. Finn. *appaa* ‘to eat greedily; to pack, stuff’ ~ SaaN *vuop pot* ‘to gobble up; to eat greedily’.
4. Finn. *ehta*, *ehtä* ‘evening; social evening’, *ehtoo* ‘evening’ ~ SaaN *ik tē* ‘yesterday’.
5. Finn. *hopea* ‘silver’ ~ SaaK. *s5ubbed* ‘soft, flexible’.
6. °Finn. *häväs* ‘withers’ ~ SaaN *sæppe* ‘the forepart of the back (of reindeer, cow, horse)’.
7. Finn. *höyhen* ‘feather’ ~ SaaI *soousa* : pl. *soksameh* ‘hair (of an animal)’.
8. Finn. *ilves* ‘lynx’ ~ SaaN *âlbâs* id.
9. Finn. *jatkaa* ‘to continue’ ~ SaaN *oat ket* id.
10. °Finn. *juntu* ‘row, train; path’ (Kar. also ‘a row of nets’) ~ SaaN *jod do* net enclosure for catching salmon’.
11. Finn. *kaari* ‘bow’ ~ SaaL *kuonar* ‘rib of a boat’.
12. Finn. *kausi* ‘period’ ~ SaaL *kuou’ tat* ‘in two (equal parts)’, SaaN *guow dâjuokko* ‘equal division’.
13. °Finn. *kero* ‘throat, mouth’ ~ SaaL *karras* ‘throat’.
14. Finn. *kilpi* ‘shield’ ~ SaaN *gâl’bâ* id.
15. Finn. *kirki* ‘rut; lust’, Est *kirg* ‘passion; flame, spark’ ~ SaaN *gâr’gâ* ‘spurt, jet’.
16. °°Finn. *kokka* ‘stem of a boat; fishhook’ ~ SaaI *koakki* ‘hook’.

¹¹ The Northern Finnic languages are Finnish, Karelian, Ingrian, Veps and Ludic.

¹² Votic together with the Northern East dialects of Estonian are considered to have direct links with Northern Finnic languages.

¹³ In this Thesis the abbreviations for the Saami languages have been modified by the author if the thesis. In the original T. Itkonen’s list (1997), the abbreviations for the Saami languages are based on Nielsen’s orthography. For instance LpN stands for SaaN = North Saami.

17. °Finn. *koskea* ‘to touch’ ~ SaaN *guos’kât* id.
18. °Finn. *kotva* ‘while; a long time’ ~ SaaL *kor^ℓfu* ‘stretch, distance’, SaaI *koadfi* ‘the interval between net-searching turns’.
19. °Finn. *kultaa* ‘to grope after tidbits in a soup; to fish with a drift net’ ~ SaaN *ẽ gol det* ‘to rummage about, dabble in something; to fish with a drift net’.
20. °Finn. *kuroa* ‘to tack, stitch loosely; to fold; to contract’ ~ SaaN *gorrât* ‘to tie together’.
21. °Finn. *kuukso*, *kuusanka* ‘Lapland jay’ ~ SaaN *guovsâk* id.
22. Finn. *kätkeä* ‘to hide’ ~ SaaN *giekât* ‘to wrap up a child and lay it in its komse [cradle]’.
23. Finn. *lapa* ‘shoulder; blade of an oar, axe, etc.’ ~ SaaI *lyepi* ‘shoulder’.
24. °Finn. *launi* ‘wooden fishhook’ ~ SaaL *luou’na* ‘baithook’.
25. °Finn. *luo-* ‘at, close to’ ~ SaaN *lusâ* ‘to’, *lut’t3e* ‘at; from’.
26. Finn. *luta* ‘pin with which the angles of a birchbark vessel are fastened to its ends’ ~ SaaN *lotte* ‘wedge’.
27. Finn. *luulla* ‘to think, believe’ ~ SaaN *lollât* ‘to be jealous’.
28. Finn. *mana* ‘abodes of the dead’ ~ SaaS *muones(j)e* ‘good spirit; bad spirit; a supernatural phenomenon as a foretoken of disease or death’.
29. °Finn. *matka* ‘journey; stretch, distance’ ~ SaaN *muot’ke* ‘isthmus’.
30. °Finn. *naama* ‘face’ ~ SaaN *namme* ‘the furry skin of a reindeer’s antlers’.
31. Finn. *nenä*, EstS *nana* ‘nose’ ~ SaaP *njuonne*, N *njunne* id.
32. Finn. *nisä* ‘teat, nipple’ ~ SaaN *njiž’že* id.
33. °Finn. *nojela* ‘elastic, fluid, soft’ ~ SaaI *njuoijal* ‘flexible’.
34. Finn. *nukkua* ‘to sleep; to fall asleep’ ~ SaaN *nokkât* id.
35. Finn. *nälkä* ‘hunger’ ~ SaaN *nælge* id.
36. °°Finn. *palvata* ‘to cure (meat)’ ~ SaaL *pueleve-* id.
37. Finn. *pensas* ‘bush’ ~ SaaN *bæsse* ‘birchbark’.
38. Finn. *permanto* ‘floor’ ~ SaaN *bærbměk* ‘each of the logs which mark off the different parts of a Saami tent’.

39. Finn. *poimia*, *poimoa* ‘to pick’ ~ SaaN *boaibmot* id., *buoibmât* ‘to fasten the boards on to the front of a kjerris [sleigh]’.
40. Finn. *potea* ‘to be ill’ ~ SaaN *buoccât* id.
41. Finn. *potka* ‘hind leg of an animal’ ~ SaaN *boaske* ‘the small of the leg with the lace of the Saami shoe tied round it’.
42. Finn. *potkea* ‘to put out a seine’ ~ SaaN *boat’ kot* ‘to tear, break, pinch off (several things)’.
43. Finn. *puhua* ‘to speak; to blow’ ~ SaaN *bossot* ‘to blow’.
44. °Finn. *rai(h)na* ‘worn-out thing’, *raihnas* ‘frail, infirm’ ~ SaaN *ruoidnât* ‘become lean’, *ruoinâs* ‘lean’.
45. Finn. *reikä* ‘hole’ ~ SaaN *raige* id.
46. Finn. *repä* ‘to tear’ ~ SaaN *râppât* ‘to open’.
47. °Finn. *riitsiä* ‘to wrench, tear off’ ~ SaaL *rihttjot* ‘to pull beyond one’s strength’.
48. °Finn. *rikeä* ‘thick, dense’ ~ SaaN *râkkâd* ‘very dense’.
49. Finn. *ripsi* ‘eyelash; husk of oats or hay’ ~ SaaN *râksâ* ‘diaper, napkin’, SaaL *ropsa* ‘curtain; eyelash’.
50. °Finn. *r(u)ohtia* ‘to dare’ ~ SaaN *roastel* ‘who dares to do anything’.
51. °Finn. *rykiä* ‘to cough, hawk’ ~ SaaN *râkkât* ‘to mate (of reindeer)’.
52. Finn. *sakea* ‘thick, dense’ ~ SaaN *suokkâd* id.
53. Finn. *salmi* ‘sound, strait(s)’ ~ SaaN *čcoal’bme* id.
53. Finn. *salvaa* ‘to put up a log house; to castrate’ ~ SaaS *soelvedh* ‘to snap (of a dog)’.
55. °Finn. *sammakko* ‘frog’ ~ SaaN *cuobbo* : *cubbu-* id.
56. Finn. *sataa* ‘to rain; to fall’ ~ SaaS *tjuetsedh* ‘to snow’, SaaN *čuocet* ‘to run into the net and get stuck in it (of fish); to hit (fig.), attack something’.
57. Finn. *sauna* ‘sauna’ ~ SaaN *suowdnje* hole dug by reindeer in the snow in order to feed’.
58. Finn. *selkeä* ‘clear’ ~ SaaL *tjiel kat*, SaaN *čielgâs* id.
59. Finn. *sierain* ‘nostril’ ~ SaaN *njunne-suorram* ‘drawn or woven zigzag pattern’, SaaL *njune-syerrim* ‘the places of nostrils in a reindeer scalp’.
60. °Finn. *solva-* : *solvassa* (adv.) ‘aslant, askew’, *solvata* ‘to insult, abuse’ ~ SaaN *soal*

- ve ‘jaw (of dog or wolf), SaaI *soalvi* ‘corner of a birchbark vessel’.
61. Finn. *somer* ‘gravel’ ~ SaaI *čuomar* id.
62. °Finn. *sompa* ‘ring at the lower end of a ski pole’ ~ SaaN *soab be* ‘stick’.
63. °Finn. *sonka* ‘crowd (of people), disorder’ ~ SaaN *soab’be* ‘lump’.
64. Finn. *suitsea* ‘to smoke, whirl’ ~ SaaI *sohčed* ‘to whirl, steam’.
65. Finn. *sulka* ‘feather; edge’ ~ SaaN *sol’ge* ‘ridge; protecting strip of board (on the bottom of a kjerris [sleigh])’.
66. °Finn. *suppa* ‘narrow, funnel-shaped; funnel-shaped depression in terrain’, *suppu* ‘narrow’, Kar. *tšuppu* ‘corner’ ~ SaaN *čop’pe* ‘bag-shaped end of a skin rug, for putting the feet in’.
67. °Finn. *säetä, säkeä* ‘to cover (e.g. the coals in a hearth with ash)’ ~ SaaN *čiekkât* ‘to hide, conceal, keep secret’.
68. Finn. *tahtoa* ‘to will, want, strive for’ ~ SaaN *duos tot* ‘to catch something which is in motion; to receive someone’.
69. °Finn. *talja* ‘skin with the hair on it’ ~ SaaN *duol lje* id.
70. °Finn. *tanner* ‘field, hard ground’ ~ SaaN *duoddâr* ‘mountain tract, high mountain moorland, bare mountain’.
71. °°Finn. *tauota* ‘to cease, stop’ ~ SaaN *duowgot* ‘to be weaned (of reindeer calf); to be ashamed to do’.
72. Finn. *toivo* ‘hope’, *toivoa* ‘to hope’ ~ SaaN *doai’vo* ‘hope’, *doai’vot* ‘to hope’.
73. °Finn. *tola* ‘path, track’ ~ SaaN *doalle* ‘winter road or track covered by snow’.
74. °°Finn. *totku* ‘guts of fish’ ~ SaaN *duot’kâ* ‘chyme in the intestines’.
75. Finn. *tuhma* ‘stupid; naughty’ ~ SaaN *dos me* ‘one who is mopish or sulky’.
76. °Kar. *typpie* ‘to stop up, caulk’ ~ SaaN *dâppât* ‘to shut, close (an opening), plug’.
77. °Finn. *tähde* ‘rest, leftovers’ ~ SaaN *dak te* ‘bone’.
78. °Finn. *täplä* ‘spot, dot’ ~ SaaN *daw’le* ‘“button” with lighter hair on a reindeer’s sides’.
79. °Finn. *törmä* ‘bank, precipice’ ~ SaaN *dær bme* ‘hill down to a river or lake’.
80. °Finn. *udella* ‘to inquire’ ~ SaaN *occât* ‘to search for, look for’.
81. Finn. *ulottua* ‘to reach, extend’ ~ SaaN *ollet* ‘to be long enough, reach’, *olâtit* ‘to

reach’.

82. Finn. *ulvoa* ‘to howl’ ~ SaaN *hol vot* id.

83. °Finn. *ume* ‘mist’ ~ SaaI *omo* id.

84. °°Finn. *uros* ‘male animal’ ~ SaaN *vâres, vârres* id.

85. Finn. *usko* ‘belief’, *uskoa* ‘to believe’ ~ SaaN *osko* ‘faith, belief’, *oskot* ‘to have faith, believe’.

86. °Finn. *usva* ‘mist’ ~ SaaN *os ve* ‘damp, sticky snow’.

87. Finn. *vaka* ‘firm, stable; calm; honest’ ~ SaaN *vuokke* ‘mode, manner, way’.

88. Finn. *vannoa* ‘to swear’ ~ SaaN *vuor dnot* id.

89. °Finn. *vasama* ‘(blunt-pointed) arrow’ ~ SaaL *vuohjēt* ‘to shoot’.

90. Finn. *vihma* ‘drizzle’ ~ SaaI *vasme* ‘freshly fallen thin snow’.

91. °Finn. *viileke* ‘strap’ ~ SaaN *vâlâk* ‘girth of a person’s body, measured over one shoulder and under the other arm’.

92. Finn. *viillä* ‘to slash’ ~ SaaN *vâggjât* ‘to cut; to cut out’.

93. Finn. *vika* ‘fault, flaw’ ~ SaaI *vahe* ‘bodily defect in a man or animal’.

94. °Finn. *vikevä* ‘fast, speedy; rapid (of a stream)’ ~ SaaN *vâkkâd* ‘swift, strong, rapid’.

95. °Finn. *viti* ‘freshly fallen light snow’ ~ SaaN *vâccâ* ‘loose snow’.

96. Finn. *väsyä* ‘to get tired’ ~ SaaN *viessât* id.

97. Finn. *väylä* ‘channel, fareway’ ~ SaaN *faw’le* ‘the water far out; the deep part of a river’.

98. Finn. *yskä* ‘cough’, Veps., Est. *üsk* ‘arms, lap’ ~ SaaN *âs’ke* ‘lap, bosom’.

From this analysis, the results were the following: from the total of 98 Finno-Saamic words, a little more than a half (55) occurred everywhere in Finnic as well as in Saami. Thirty-six words (°) appeared only in Northern Finnic languages, and the other 7 (°°) also appeared in Votic and Northeast dialects of Estonian. Itkonen evaluated the results based on two factors. The first was temporal, by which 98 Finno-Saamic words might represent a satisfactory number during 4,500 years of conservation, and the second factor was based on areal circumstances, by which the number of these proposed 98 Finno-Saamic word stems was then, as Itkonen says, “unexpectedly low” (p. 246).

After examining the Finnic and Saami lexical evidence, Itkonen introduced another idea in which the connection between the Finnic and Volgaic languages as well as the relationship of Saami with the Volgaic languages could be examined.

In the first case, his list consisted of 59 words that were shared only in Finnic, Mari and Mordvinic but nowhere else in the rest of the Uralic language family. In this list, the words containing one “bubble” (°) symbol were specific to Finnic and Mari, those with two “bubbles” (°°) occurred in all three language groups and those with no symbols were specific only to Finnic and Mordvin:

1. Finn. *ahtera* ‘farrow’ ~ MordE *ekšt’er* id.
2. Finn. *anoa* ‘to ask, beg’ ~ MordE *anams* ‘to want, ask, beg’.
3. Finn. *asea* ‘to place’, *asema* ‘place, position’ ~ MordE *ežem, izim* ‘place, position; bench’.
4. Finn. *haaksi* ‘vessel, ship’ ~ MordE *šaks, tšaks* ‘crook; pot’.
5. Finn. *haamu, hahmo* ‘ghost; shape, outline’ ~ MordE *tšama* ‘face; slope’.
6. °°Finn. *hapan* ‘sour’ ~ MordE *tšapamo*, MariW *šapā* id.
7. °°Finn. *huhmar* ‘mortar’ ~ MordE *tšovar*, MariW *šuer* id.
8. Finn. *huuhtoa* ‘to rinse’ ~ MordE *(k)štams* ‘to wash’.
9. °°Finn. *jauhaa* ‘to grind’ ~ MordE *jažams* ‘to grind, pound’, MariW *jangäžem* ‘to chew; to ruminate; to grind’.
10. °Finn. *jumala* ‘god’ ~ MariW *jämä* ‘heaven; supreme god; image of god’.
11. Finn. *jutella* ‘to talk, chat’ ~ MordE *jovtams, jofiams* ‘to say, tell, command, explain’.
12. Finn. *kaikua* ‘to echo’ ~ MordE *kajgems* ‘to ring, sound, echo’.
13. Finn. *kehkerä* ‘convex, bulbous’ ~ MordE *kitškere* ‘crooked, twisted’.
14. Finn. *kerä* ‘ball (of yarn), clew’ ~ MordE *ki/re* id.
15. °Finn. *kevät* ‘spring’ ~ MariW *kängež* ‘summer’.
16. Finn. *kitkeä* ‘to pull up (weeds)’ ~ MordE *kotškoms* id.
17. Finn. *kymmen* ‘10’ ~ MordE *kemeñ* id.

18. °Finn. *kyntää* ‘to plough’ ~ MariE *künt’šem, küntšëm* ‘to dig out; to hollow out’.
19. Finn. *kyrsä* ‘rye bread’ ~ MordE *kše, kši* ‘bread’.
20. °Finn. *kärki* ‘black woodpecker’ ~ MordE *keřgata*, MariE *keryä* id.
21. Finn. *latva* ‘crown (of a tree)’ ~ MordE *lato* ‘roof, shelter’
22. Finn. *lehmä* ‘cow’ ~ MordE *l’išme* ‘horse’.
23. Finn. *leppä* ‘alder’ ~ MordE *l’epe* id.
24. °Finn. *lähi-* ‘near’ ~ MariW *lišän* ‘near, close to’.
25. Finn. *lämmi* ‘warm’ ~ MordE *l’embe* ‘warm; warmth’.
26. Finn. *mahi* ‘decay (n.), mould’ ~ MordE *makšo* ‘touch of decay’.
27. Finn. *maksaa* ‘to pay; to cost’ ~ MordE *maksoms* ‘to give’.
28. °Finn. *norja* ‘flexible’ ~ MariW *nörq* id.
29. Finn. *nyde* ‘supporting pole, prop’ ~ MordE *neže* ‘supporting pole’.
30. °°Finn. *nyhtää* ‘to tear, pull up’ ~ MordE *ńevt’ams* ‘to pick, pull up’, MariW *ńäktäm* ‘to skin’.
31. Finn. *nyky-* ‘present, present-day’ ~ MordE *ńej* ‘now’.
32. Finn. *ohto* ‘bear’ ~ MordE *ovto, oŧto* id.
33. Finn. *olki* ‘straw’ ~ MordE *olgo* id.
34. °Finn. *paarma* ‘gadfly’ ~ MariW *parmä* id.
35. Finn. *pyöhtää*, Ing. *pettää* ‘to make butter’ ~ MordE *pivt’ems, pift’ems* ‘to churn; to mix clay; to stamp’.
36. °°Est. *pähn* ‘linden’ ~ MordE *pekše, M päšä*, MariW *pistq* id.
37. Finn. *rahko* ‘forked stick to hold a pinewood torch’ ~ MordE *raško* ‘branch’.
38. °Finn. *saarni* ‘ash (tree)’ ~ MariW *särni* ‘great sallow; white willow’.
39. Finn. *sattua* ‘to hit; to touch; to happen’ ~ MordE *satoms* ‘to suffice, fall as one’s lot; to belong’.
40. Finn. *siemaista* ‘to gulp down’ ~ MordE *šimems* ‘to drink’.
41. Finn. *sika* ‘pig’ ~ MordE *tuvo* id.
42. Finn. *sisä-* ‘inside’ ~ MordM *sezäm* ‘heartwood’.
43. °Finn. *sonta* ‘dung’ ~ MariW *šandä* id.
44. Finn. *soppi* ‘corner’ ~ MordE *šopoms* ‘to hide, keep secret’.

45. °°Finn. *sota* ‘war’ ~ MordE *šudoms* ‘to curse, swear’, Mari *šudem* id.
46. Finn. *sulkea* ‘to close, shut’ ~ MordE *šolgoms* id.
47. °Finn. *survoa* ‘to stamp, crush’ ~ MariW *šärem* ‘to stamp; to pound (clothes); to stick’.
48. °Finn. *syrjä* ‘edge, border’ ~ MariW *šör* id.
49. °Finn. *sänki* ‘stubble’ ~ MariW *šängä* ‘dry twig in a bush’.
50. °°Finn. *tammi* ‘oak’ ~ MordE *tumo*, MariW *tum* id.
51. Finn. *tankea* ‘stiff, rigid’ ~ MordM *tangäda* ‘stiff, firm, strong’.
52. Finn. *tappaa* ‘to kill; to thresh’ ~ MordM *tapams* ‘to strike, hit’.
53. °°Finn. *tuma* ‘kernel of a fruit’ ~ MordE *ton*, *tov* id., MariW *ton* ‘kernel, heart’.
54. Finn. *työ* ‘work’ ~ MordE *t’ev* id.
55. Finn. *urjeta* ‘to go away, depart’ ~ MordE *orgod’ems* ‘to flee’.
56. Finn. *vaimo* ‘wife; woman’, Est. *vaim* ‘spirit, soul; (turn of) mind’ ~ MordE *ojme* ‘breath; spirit, soul; living being’.
57. °°Finn. *vaahtera* ‘maple’ ~ MordE *ukštor(o)*, MariW *baštar* id.
58. °°Finn. *vehnä* ‘wheat’ ~ MordE *viš* ‘spelt’, MariW *bištä* id.
59. Finn. *valaa* ‘to cast; to pour, sprinkle’ ~ MordE *valoms* ‘to sprinkle; to cast’.

The second list consisted of lexical correspondences only common to Saami with Mordvin and Mari but nowhere else.

1. SaaN *al’do* ‘full-grown female reindeer’ ~ MordE *el’d’e* ‘mare’.
2. SaaN *bâr det*, *bor det* ‘to arrange or put things in rows or in order’ ~ MariW *pärdem* ‘to cover; to wrap, swaddle’.
3. SaaN *čokkât* ‘to sharpen, cut to a point’ ~ MordE *šuvoms* ‘to sharpen’
4. SaaN *dik’tet* ‘to allow, let; to stop, let stay’ ~ MordE *tuvtoms* ‘to let fall; to unfasten’.
5. SaaN *doares* ‘which goes across, cross-, side-’ ~ MordM *turks*, E *troks* ‘crossways’, MariW *toreš* ‘breadth; weft; crossways’.
6. SaaN *doar’ve* ‘as much as properly belongs or is needed’ ~ MordE *duro* ‘as much as; a match for’.

7. SaaN *gâl'lje* 'wide, roomy' ~ MordE *kel'e* 'breadth, width'.
8. SaaN *gâs'ket* 'to pluck; to tease' ~ MordE *kotškams* 'to pick, collect, choose'.
9. SaaN *giđđâ* 'spring (season)' ~ MordE *ked'ij* 'of spring'.
10. SaaN *gæl'det* 'to bend, cock, stretch (bow, gun, spring)' ~ MordE *kil'd'ems* 'to harness', MariW *keldäm* 'to tie up a horse, tether'.
11. SaaL *kiedja* 'trace of a kjerris [sleigh] or skis' ~ MordE *ki* 'way'.
12. SaaN *luok'čât* 'to cut out a hole in wood' ~ MordE *lakšems* 'to cut, hew', MariW *lokšänt'sam* 'to cut'.
13. SaaN *lække* 'depression, hollow (in terrain)' ~ MordE *l'ej* 'stream; ravine'.
14. SaaN *mieskâ, mieskâs* 'decayed, rotten' ~ MariW *mäkš* 'dry, decayed wood'.
15. SaaN *nâr'get* 'to fuck' ~ MordE *nérgems* 'to strike, hit; to pound the clothes'.
16. SaaN *ridne* 'rime on trees and other things' ~ MariE *rün* 'rime'.
17. SaaN *sâd'det* 'to stretch, stretch out, spread' ~ MariW *šäntem* 'to set, put, place'.
18. SaaN *suod'dât* 'to cut up (meat or fish) for boiling; to make a clearing in a wood' ~ MordE *sańd'ems* 'to clear (a forest); to clean'.
19. SaaN *suodđât* 'to let the air out, leak' ~ MordM *šud'äms* 'to flow, run'.
20. SaaN *suok'sâ* 'larva of meat fly, maggot in meat or fish' ~ MordE *suks* 'maggot', MariE *suks* id.
21. SaaN *vâl've* 'pack of wolves or dogs' ~ MordE *vel'e* 'village', MariW *-blä, -blä* plural suffix.

In the first list, 59 words were found to be common specifically to Finnic with the Volgaic languages. From these, 39 lexical correspondences were considered to be common specifically to Finnic and Mordvin, 11 words were common to all three branches and the other 10 words were common only to Finnic and Mari.

According to the second list, where corresponding lexical evidence between Saami and the Volgaic languages has been highlighted, only 21 words were found by T. Itkonen.

With these results, Itkonen points at the fact that 59 words connect the Finnic languages

with Volgaic, and in the previous list, only 55 stems connect the Finnic languages (words reaching the southernmost dialects) with Saami. Concerning the Saami-Volgaic connection, the rates are remarkably low in comparison with the above-mentioned Finnic. Based on these calculations, Finnic shares more lexical correspondences with Mordvinic than with Saami.

Later, P. Sammallahti (1999) reevaluated Itkonen's list of the original Finno-Saamic vocabulary and concluded that an entire set of cases had been left out. According to the current research at that time, the total number of Finno-Saamic word stems could be as high as 280, and from these, 60 could be considered to be loans between the languages. Therefore, the lexical evidence represents a strong argument for the existence of the Proto-Finno-Saami language. Additionally, Sammallahti (p. 74) presents 11 new words with detailed descriptions that can be traced to the Proto-Finno-Saamic stage:

1. Fi *siivota* ~ SaaN *divvut*, with the meaning in Fi cleaning and in Saa to correct/repair. It can be reconstructed in the Proto Finno-Saami language as **tīvo-*. A parallelism between the verbs cleaning (Fi *siivota* - *siivoamisen*) and repairing (Fi *korjata* - *korjaamisen*) can be observed, since for instance in Estonian the verb *koristada*, which carries the meaning of cleaning. Therefore, according to Sammallahti the etymology between these verbs is clear in terms of its meaning as well as in phonology.

2. Fi *sitkeä* ~ SaaN *dadgat*, meaning something firm and solid. It can be reconstructed in the Proto Finno-Saami language as **tiδkitä*. This word does occur in all Finnic languages, however it does not appear in other Saami languages than only in North Saami.

3. Fi *vähä* ~ SaaN *vássit*, with the meaning to go past, for example in time. Its common reconstruction appears to be **väšä-*. The word's usage occurs in both language groups. Similarities can be found in Mordvin *vež-*, with the meaning of small.

4.Fi *jyhkeä* ~ SaaN *jaskat*, meaning in SaaN calm/peaceful and in Fi solid. Its Proto Finno-Saamic reconstruction is **jüškitä*. In the Saami languages the word appears everywhere, however among the Finnic languages, it is restricted only to Finnish. Semantically „hiljaisen“ (quiet) and „järeän“ () are possible to combine with the concept of „liikahtamattoman“ (), for instance in Swedish stilla : hiljaa; hievahtamatta, meaning quietly, without any hesitation.

5.Fi *sileä* ~ SaaN *čallat*. The Finnish word carries the meaning soft and the Saami word sleek. Their common form has been reconstructed as **šili-*. The word stem appears in the whole language area. In Saami the word as a verb has a precise meaning: to smooth the horns or to remove the skin of the growth stage by rubbing it. However this word as a noun, carries a little different meaning: either the smoothness of the skin of the horns (the stage at which the skin can be rubbed off) or the leather at such a stage.

6.Fi *simpele* ~ SaaN *dappal*, with the meaning in Finnish and Saami an evenly flowing area in the rapids, fired. Its possible common reconstruction is **timpil*. The change **ti* > **si* in Finnish proves a long heritage.

7.Fi *sitkain* ~ SaaN *časkkis*. Its Finnish meaning is tough and the Saami meaning is wide side/body, for instance of a fish or meat. In Finnic is nowadays the word used in Finnish, Karelian, Ludic, Veps and in Northern Estonian.

8. Fi *patvi*, *patvia* ‚lihoa‘, with the meaning ~ SaaS *båedvie* ~ *båervie*, with the meaning. The Proto Finno-Saamic reconstruction is **poðva*. In the Finnic languages, this word has several meanings that can be associated with some kind of overgrowth or obesity. Phonetically, the word is similar in Finnic as the word *sarvi*, meaning horn (< **sor-va*).

9.Fi *tyнкиä* ~ SaaN *caggat*, with the meaning in Fi to support, to prevent and in SaaN support, prop and branch. It can be reconstructed in the Proto Finno-Saami language as

**čūŋki-*, **čūŋkā*. The words occur in all the Saami speaking area as well as in the whole Finnic speaking area.

10. Fi *tunkea* ~ SaaN *coggat*, meaning in Fi stuff, throw up, dress up and in SaaN the same. The words appear in the whole speaking area of both language groups. Its common reconstructed form is **čun̄ki-*. In this case another change in the development of the Finnic languages can be observed: **č-* has changed into the stop *t* in initial positions, as well as in intern positions. An example provided by Sammallahti is PFS **šeččä* > Fi *setä* (uncle). Another similar sound change of this type has been **č- > h*, which occurs mostly in Finnic etymologies with no counterparts in Saami. The words showing these kind of sound change are usually related to agriculture and can be explained on the basis of Volgaic loans.

11. Fi *sii-* (*siihirs* 'tasakertahirsi') ~ SaaN *cakŋa*, with the meaning in Fi a timber supporting a traditional birch-bark roof and in SaaN. The common reconstructed Proto Finno-Saamic word is **čiŋi*. Among the Finnic languages the word occurs only in the Southern Finnish dialects and in the Saami languages only Northern, Lule and Southern Saami.

6.1.1 Difficulties of common lexicon

How arguments in terms of a common lexicon might support a genetic relatedness is a complex topic, since the case of Saami and Finnic displays difficulties due to the existence of the previously mentioned etymological nativization. This process has been analyzed by A. Aikio (2007).

Etymological nativization is a process that occurs between two related languages when bilingual speakers become aware of regular sound correspondences between these lan-

guages. These correspondences are then applied onto new loanwords in accordance with the sound correspondences attested to in the cognate vocabulary. For instance, two different substitutions can be observed—an etymological substitution: Fi *i* > SaaN *a*, as in *hintā* > *haddi* (price), or Fi *u* > SaaN *o*, as in *surma* > *sorbmi* (bane, death), and a phonetic substitution: Fi *i* > SaaN *i*, as in *hirsī* > *hirsā* (timber), or F *u* > SaaN *u*, as in *surkea* > *surgat* (miserable).

What is problematic about etymological nativization is that the loanwords transferred from Saami to Finnic and from Finnic to Saami have in some cases made younger borrowings look like cognates from a phonological point of view. For instance, M. Korhonen (1981) has considered the above-mentioned phonological substitution patterns as reflections of distinct periods of borrowings. According to him, the Finnic loans shown in SaaN *a* would have originated from an older period, whereas loans that have retained the same *i* would represent younger loans.

Nevertheless, these correspondences are not valid criteria for determining the age of borrowings, and, therefore, they are not considered reliable indicators, because there are also young-looking loans showing the substitutions Fi *i* > SaaN *i*: for example, Fi *vikā* > SaaN *vihki* (fault) and Fi *u* > SaaN *u* and Fi *surkea* > *surgat* (miserable). There are also loans that are much older, according to their distributions¹⁴: for example, Fi *muista-* > SaaN *muiti-* (to remember). Concerning the etymological substitution Fi *i* > SaaN *a* and F *u* > SaaN *o*, it has been pointed out by A. Aikio (p. 28) that many loanwords younger than PS display these types of substitution (for instance, Fi *hintā* > SaaN *haddi*) because of the retention of *h*, which was missing in PS and could have only been established through younger loanwords. Additionally, there are loans coming from much older layers of borrowings, such as Fi *viha* (< *viša) > SaaN *vašši*, since they display a shift of *š > *h that took place between the Pre-Finnic and Proto-Finnic stage.

¹⁴ Their distribution reaches the South-Westernmost and Easternmost Saami languages.

In light of the foregoing discussion, etymological nativization makes the distinguishing of cognates from borrowings more difficult. Therefore, among the 220 Finnic and Saami cognate words (Sammallahti 1999) that are nowhere else found in the Uralic language family, many or even most may simply be undetected borrowings between already differentiated branches (Aikio, 2012).

6.2 Loanwords

Even though foreign loanwords may not represent direct arguments for a common proto-language, they can still serve as minor hints due to their distributional peculiarities. Finnic and Saami possess similar loanword layers.

Both language groups have adopted loanwords from two common sources (without considering loans from Finnic to Saami and from Saami to Finnic) and from their geographically neighboring language groups (Germanic and Baltic). These languages extensively contributed to the lexicon of Finnic and Saami over a considerable period of time.

Finnic and Saami possess superficially similarly old strata of Baltic and Germanic; however, the difference is that Finnic has more old borrowings than Saami. Concerning the common loans, Saami only partially shares its oldest Baltic as well as Germanic loans with Finnic.

If the differences between the distributions of Baltic and Germanic loanwords are examined, only 32 old Baltic loanwords are common to Finnic and Saami, and 8 of them are limited only to Saami. On the other hand, Saami has about 63 Proto-Germanic loans, from which 23 loanwords seem to have cognates in Finnic.

The 32 Baltic loanwords common to Finnic and Saami are, according to A. Aikio (2012) and the Álgu database¹⁵, as follows:

SaaN *bievla* ‘snowless patch’, *duollji* ‘hide’, *duovli* ‘tinder’, *faggi* ‘hook’, *giehka* ‘cuckoo’, *gahpir* ‘cap’, *giehpa* ‘soot’, *gohččut* ‘call, order’, *guoibmi* ‘companion, spouse’, *guovllas* ‘wooden collar’, *jávri* ‘lake’, *johtit* ‘move, travel, migrate’, *leaibi* ‘alder’, *loggemuorra* ‘tree that splits along its annual rings’, *luokta* ‘bay’, *luossa* ‘salmon’, *luovdi* ‘net float’, *luovvi* ‘storage platform’, *riessat* ‘fringe a scarf’, *ruoida* ‘shank’, *sarvva* ‘moose’, *sarvvis* ‘reindeer bull’, *suoidni* ‘grass, hay’, *suolu* ‘island’, *suorri* ‘fork, branch’, *vietka* ‘adze’, *vuoras* ‘old’; SaaL *miehttjen* ‘far away’, *muolos* ‘hole in the ice (near the shore in spring)’, *sassne* ‘tanned leather’; SaaI *ruodâs* ‘wrist part of a glove’, SaaS *saertie* ‘reindeer heart (as food)’.

The 63 Proto-Germanic loanwords in Saami, together with the 23 loanwords with cognates in Finnic, are as follows:

SaaN *bahta* ‘ass’, *boldni* ‘mound’, *borjjas* ‘sail’, *borsi* ‘rapids in a canyon’, *boršut* ‘foam’, *buoidi* ‘fat’, *deahkki* ‘muscle’, *duoddut* ‘tolerate’, *gahččat* ‘fall’, *gavja* ‘dust’, *geahččat* ‘look, watch’, *geardni* ‘thin snow-crust’, *gierdat* ‘endure’, *guo- bir* ‘reindeer hoof’, *guohpa* ‘mold’, *guoldu* ‘snow storm’, *guolla* ‘testicle’, *guomu* ‘chyme’, *guos’si* ‘guest’, *guovla* ‘overhanging snowdrift’, *guovlat* ‘peek’, *lađas* ‘joint’, *lahttu* ‘limb’, *luoikat* ‘lend’, *luoska* ‘decorative trimming on the edge of a man’s coat’, *mas’sit* ‘lose’, *ravda* ‘edge’, *ruoksi* ‘udder’, *ruossat* ‘stumble’, *ruovda* ‘edge’, *ruovdi* ‘iron’, *sadji* ‘place’, *suovdi* ‘gill’, *suovri* ‘filthy person’, *viessat* ‘get tired’, *vuohčču* ‘narrow and wet bog’, *vuohppi* ‘small and narrow bay’, *vuoksa* ‘depth of a fishing net’, *vuopman* ‘hunting fence’, *vuorbi* ‘lot’, *vuordit* ‘wait’, *vuordnut* ‘swear’, *vuos’su* ‘bellows’, *vuotta* ‘

¹⁵ Álgu database can be found under the institute for the languages in Finland. The word „álgu“ in North Saami means „origin“: (<https://kaino.kotus.fi/algu/index.php>)

shoelace', *vuovdi* 'forest'; SaaS *boernes* 'embryo', *doerpedh* 'need', *guejhtie* 'strong heat', *guelhtie* 'cold weather in summer', *moenedh* 'mention', *roevtedh* 'get sunburnt', *soegkes* 'burnt', *vuerie* 'senses'; SaaL *buollda* 'hillside', *buollnat* 'wilt', *gahppat* 'leap, jump', *guobas* 'witch', *guorgoj* 'rocky shore', *luogge* 'rectum', *nuobrre* 'thin inner part of birch- bark', *vuolldo* 'the strongest bull in the reindeer herd'; SaaP *ruos'sjie* 'a kind of hard grass'; SaaSk *teä'mes* 'dark, dim'.

The first proposed interpretation of the examined loanword distribution could be that if the Baltic loanwords are older than the Germanic loans, they could have been adopted into the common Proto-Finno-Saami language before Finnic and Saami diverged as two independent languages. After the split of the common proto-language, the two independent languages would have been Pre-Proto-Finnic and Pre-Proto-Saami.

Following this, Baltic contact would have ceased with Saami, but on the other hand, contact with Germanic would have intensified. Pre-Proto-Finnic would have, however, still developed under a considerable influence of both old Baltic and Germanic loans due to the significant number of loans found among the Finnic languages.

The second interpretation offers a different explanation for the peculiar distribution of Baltic as well as Germanic loans in the Finno-Saamic languages. In this case, instead of a common proto-language, Finno-Saami would represent a dialect continuum (Aikio, 2012:73). In contrast to the above argument, the different loan distributions of Proto-Germanic and Proto-Baltic would be the result of there having been two different geographical positions of Pre-Proto-Saami and Pre-Proto-Finnic instead of two contrasting periods of borrowings.

Thus, the Finno-Saami dialect continuum would have consisted of two speech communities, the Pre-Proto-Finnic community and the Pre-Proto-Saami community. Due to their different geographic positions, each speech community would have had independent patterns of interaction with their surrounding neighbor Proto-Germanic. Additio-

nally, some of the loanwords would have diffused between the Finno-Saami dialect continuum and become part of both speech communities. The above-mentioned higher number of Baltic loans (32) common to Finnic and Saami would then be explained by the possibility that only the speakers of the Pre-Proto-Finnic community would have had notable contact with Proto-Baltic, and the loans would have then further diffused through the Finno-Saami dialect continuum into the Pre-Proto-Saami-speaking community.

It could perhaps be problematic that there are three Baltic loans in Saami without cognates in Finnic: SaaN *šielbmá* "threshold," *šear'rá*t "shine brightly" and *šuvon* "good dog," since all of these loans display a secondary Proto-Saami sibilant *š, and, thus, due to phonological reasons, cannot be traced back to any common Proto-Finno-Saamic stage. However, according to A. Aikio, these cases could have been borrowed at a later stage from Pre-Proto-Finnic and gradually become lost in Finnic.

Because both Finnic as well as Saami possess Baltic and Germanic loans that are only restricted to them, this indicates that the homeland of Proto-Finno-Saami was somewhere where the language had ideal conditions for developing contact with other neighboring languages.

Among the earlier scholars, E. Itkonen (1966: 42) noted that if the number of Baltic loans were much smaller in Saami, it would clearly signify that there was no direct contact between Saami and Baltic. Therefore, all of the loans could have been mediated via Finnic. Due to the phonological structure of the Baltic loans in Saami, Itkonen assumes that these were adopted only then, when Proto-Saami separated from Proto-Finno-Saami, immediately after the contact with Baltic began.

VII. Interdisciplinary arguments

This last chapter is dedicated to interdisciplinary arguments, which concern archaeology combined with linguistic findings. The aim of such research is to establish a certain agreement between the findings of both fields to better understand the prehistory. In the first and only section, the first subsection focuses on the location of a Finno-Saamic homeland. In other words, the chapter discusses what the evidence for this homeland is (and used to be) to bring the research toward a common understanding.

7.1 The homeland of Proto Finno-Saami

7.1.1 Older research

In the older research, two main hypotheses have been established concerning the locations of a homeland: the migration theory and the continuation theory.

The migration theory is associated with Vilhelm Thomsen, who in his book *Beröringer mellem de finske og de baltiske (Litauisk-Lettiske) sprog*, written in 1890, suggested the hypothesis of the migration of Proto-Finns. Shortly before him, a similar idea was presented in the book *Opera Selecta I* in 1859 by Henrik Gabriel Porthan.

Both scholars argued that the Proto-Finns arrived from their ancient Proto-Uralic homeland into today's Finland or Estonia, more precisely at the shores of the Baltic Sea, in the Iron Age. Thus, the Balto-Finnic contact occurred somewhere east of today's Estonia when the Proto-Finnic-speaking people were still on the move to the west. The high number of Baltic loanwords in Finnic can be taken as evidence for intensive contact in the Gulf of Finland area. V. Thomsen additionally proposed that the Balto-Finnic contact would have been older than the contact between Finnic and Germanic due to the

fact that Germanic loanwords did not develop through the same Finnic phonetic changes.

The continuation theory, on the other hand, was first presented by a Soviet Estonian archaeologist, Harri Moora, in the 1950s and discussed in the work *Pirmatnējā kopienas iekārta un agrā feodālā sabiedrība Latvijas PSR teritorijā* (1952), then in *Eesti rahva ja naaberrahvaste kujunemisest arheoloogia andmeil* (1956) and in *Zur ethnischen Geschichte der ostseefinnischen Stämme* (1958). The theory was mostly accepted in the former Soviet Union until the turn of the 21st century.

According to this theory, the people who would have spoken Proto-Finno-Saami were associated with the Neolithic Combed Ware culture (dated to 3000 BC), whose people inhabited the Baltic Sea shores continuously over millennia. Then, Balto-Finnic contact took place when this Combed Ware culture met the Northwest Indo-European-speaking Battle Axe culture between 2000 and 1800 BC, whose people were arriving in Estonia and Finland.

The theory has also been supported by Christian Carpelan and Asko Parpola in 2001. According to this theory, this indicates that the Proto-Finno-Saami language disintegrated due to the introduction of the Northwest Indo-European language in the same area. Carpelan and Parpola, however, suggest a different dating of about 3200 BC. Their assumption is based on the fact that the prehistorical Combed Ware culture is the original, more ancient Lyalovo Ware culture, which was, according to them, a candidate for being Proto-Uralic speaking. Additionally, the Combed Ware culture reflects an infiltration of people from somewhere near the upper Volga, and it could be said that these immigrants brought some type of Late Proto-Uralic language with them (Carpelan & Parpola p. 79-82).

According to both scholars, the people speaking Proto-Northwest Indo-European were not numerous, and therefore they eventually merged with the Proto-Finno-Saami-speaking community. This assimilation led to the formation of sharp cultural boundaries in the Combed Ware area between the northern and southern parts. Consequently, the Pro-

to-Finno-Saami language, as one unity, began its disintegration to such an extent that the southern part of Combed Ware became an independent Proto-Finnic branch of the Uralic language family and the Northern part became the Pre-Proto-Saami language.

This continuation theory has been subject to a few criticisms. For instance, Ante and Aslak Aikio (2001) have expressed concerns regarding this hypothesis.

First, the suggested dating of the disintegration of the Combed Ware prehistorical culture by Carpelan and Parpola (2001) is about 3200 BC, which would then represent a separation of Finnish and Estonian for some 5000 years. According to Aikios, the relationship between these two languages seems too close for them to have been separated from each other for such a long time. Second, it has been said that the Neolithic Combed Ware culture inhabited the Baltic Sea shores. Aikios believes that the Bay of Finland might indeed have connected the peoples, rather than separated them, on its shores; however, this may have been valid for a shorter period of time, rather than for thousands of years.

A few years later, Aikio (2012:104) added a few remarks on the continuation theory. Although such a scenario seems appealing, it belongs more to the realm of speculation than that of an argued theory. It is difficult to correlate with prehistorical cultures since, first of all, there is no clear evidence of a distinct common Proto-Finno-Saamic language. Second, the question remains as to whether it is possible from a linguistic point of view that Proto-Finno-Saamic could have split into Pre-Proto-Saami and Pre-Proto-Finnic as early as 5000 years ago. Third, there is no evidence that the Combed Ware culture in Finland would have been Uralic speaking. Fourth, there is also no evidence that prehistorical cultures such as Combed Ware and Corded Ware corresponded to language families. Lastly, there is no evidence that Finnic was spoken in Finland before the Iron Age.

Consequently, Parpola (2012) revised his earlier suggested hypothesis and attempted to present a more plausible scenario so that both archaeological as well as linguistic argu-

ments could to some extent correlate with each other.

His new proposed theory is based on the suggestion of Jaakko Häkinen (2009) that the Proto-Uralic language split into three different dialects: West Uralic, Central Uralic and East Uralic. The Western dialect, together with the Central dialect, remained united for some time after the separation with the Eastern dialect group. The West Uralic dialect later split into Finnic, Saami and Mordvin.

In Parpola's suggestion, the only possible prehistorical culture that could have spoken the Proto-Finno-Saami language would have been the Netted Ware culture, which he dated to around 1900 BC. This prehistorical culture succeeded the Volosovo culture, which was located in the Volga-Oka region, and according to Parpola, this prehistorical culture also may have spoken Proto-Uralic. By 1700 BC, the Netted Ware culture had spread into the west, up to the Narva River and to the north to most of Finland, with the exception of coastal regions.

By proposing a second suggestion, Parpola had considered Juha Janhunen's (2009) opinion that Finnic could be closer to Mordvinic than to Saami, and therefore the earlier-assumed Proto-Finno-Saami language was no more widely taken into account.

The Netted Ware culture, which formed in the upper Volga area around 1900 BC, Parpola indeed connects with the West Uralic dialect. Soon after its formation, the culture reached Finland and Karelia by approximately 1800–1700 BC. Later, around 1000 BC, this prehistorical culture expanded eastward into the mid-Volga area, which is located between the mouths of the Oka and Vyatka rivers. The derived neighboring culture was the Gorodets culture, which is assumed to belong to Proto-Mordvinic. However, the homeland of Para-Saami would have been the southern part of Lake Ladoga and Lake Onega.

Additionally, Parpola mentions that there are several innovations shared by Finnic and the Mordvinic proto-language. One of these innovations is the substratum words of non-

Uralic origin, which are missing from Proto-Saami. Even though Saami also possesses substratum loanwords, they are considered to come from earlier cultures of more northern regions.

Based on the shared linguistic innovations in Proto-Finnic and Proto-Mordvinic, as well as archaeology, Parpola found that the correlations are about a millennium younger than Proto-West-Uralic, and from that, the ancestor of the Proto-Saami language must have been the first branch to split, almost immediately. This was based mostly on the operation of the Seima-Turbino intercultural trader network, which he dates to approximately between 1900–1600 BC. Pre-Proto-Saami would have separated from Proto-West-Uralic and arrived together with the Seima-Turbino artefacts in southern Finland. These people were apparently warrior-traders belonging to the elite of the Netted Ware culture.

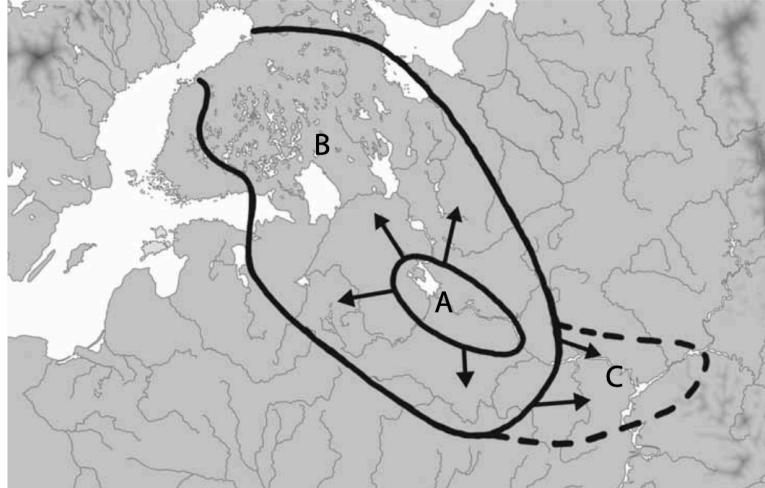
Concerning the spread of Proto-Finnic to Finland and the eastern Baltic, it is suggested to have occurred a thousand years later, approximately during 800–500 BC. The speakers of Proto-Finnic would have been warrior-traders, who brought Akozino-Mälär axes to the southern and southwestern parts of Finland as well as to the Åland Islands. Another point of archaeological evidence Parpola uses to support his new hypothesis is the tarand-graves, which have been found in the south and southwestern coast of Finland. Due to the great number of these artefacts, a movement of a fair number of people would be expected.

According to Parpola, this scenario could be also explained on linguistic grounds, as Proto-Finnic's morphemic, syntactic and phonemic structure has greatly changed, while Saami has preserved the Proto-Uralic phonology.

Thus, from the above-mentioned arguments, it can be understood that the Saami branch would have been the first branch to separate from West Uralic, while the Finnic and Mordvinic branches would have still formed one unity.

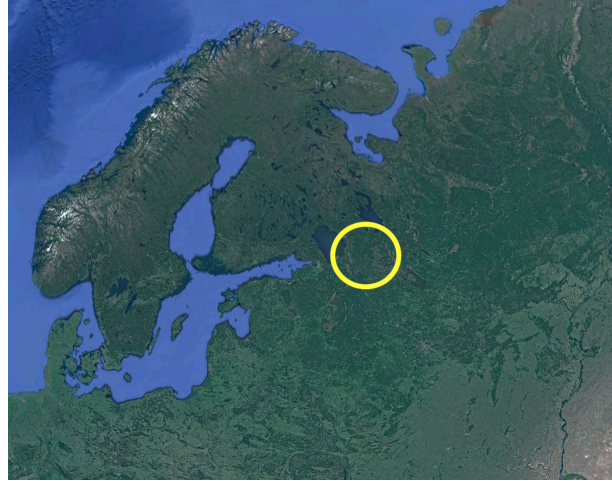
The following map is an approximate illustration of the possible homeland of the Netted

Ware culture, which is indicated by “A.”



(Source: *Formation of the Indo-European and Uralic (Finno-Ugric) language families in the light of archaeology: Revised and integrated 'total' correlations*, p. 151)

The next map shows the possible geographical position (in yellow) of the early separated Para-Saami.



(Source: Google Earth Pro, taken and marked by the author of the Thesis)

7.1.2 Current view

Valter Lang is an Estonian archaeologist who, among other activities in his field, dedicates his research to the origin of Finnic in Fennoscandia and the Baltic. In 2015, at the 12th Congressus Internationalis Fenno-Ugristarum¹⁶, he presented the paper “Formation of Proto-Finnic – An archaeological scenario from the Bronze Age/Early Iron Age.” Later, in 2018, he published a book called *Läänemeresoome tulemised*. The publication of Lang’s book was followed by a review from Prof. Riho Grünthal (2018), whose title *Ein bedeutender Fortschritt in der Erforschung der Frühgeschichte des Ostseefinnischen* (eng. A significant advance in research of the early history of Finnic) already demonstrates the importance of and newly updated discussion on this topic.

¹⁶ CIFU is an international congress for Finno-Ugric studies. Its program consists of plenary sessions, symposia and thematically organized sections. The CIFU XII has been in Oulu, Finland and it takes place every four years.

The essentials of V. Lang's research are that he considers attempts such as finding a suitable archaeological culture for the distribution of languages misleading. Prehistorical cultures have not been languages, and neither have ethnic groups. Therefore, assumptions such as that the Corded Ware culture had been Proto-Indo-European speaking, as had been promoted earlier, are, according to him, wrong. Instead, an archaeological culture such as the Corded Ware should be understood as a context in which Proto-Indo-European contact with local tribes may have taken place.

Thus, V. Lang's research method consists of studying different prehistorical archaeological contexts in which the formation of a language is understandable, so that a final scenario can correspond to known evidence of archaeological as well as linguistic origin. Lang's research (2015, 2018) offers a view of recent achievements in Finnic studies from various concerned disciplines: linguistics, archaeogeneticists with ancient DNA (aDNA) and, to some extent, archaeology.

The entire topic concerns the creation of Proto-Finnic as a whole, and, for the purpose of this thesis, only the sections that cover the early phase of Proto-Finnic (the so-called Proto-Finno-Saami) are discussed in this chapter.

Lang considers for his research a similar starting point as A. Parpola, which is based on J. Häkkinen (2009) and P. Kallio's (2006) suggestions that the Proto-Uralic language disintegrated in approximately 2000 BC into three dialects: Western, Central and Eastern Uralic dialects. This signifies that the chronology in linguistic dating has been shortened. Geographically, the proto-language could have been located somewhere in the Volga-Oka-Kama region.

These new datings point at the problematic correlation with H. Moora's earlier-mentioned proposed hypothesis. Since the Proto-Uralic language disintegrated in 2000 BC in a different location, this means that the prehistorical culture in the Stone Age, located in the eastern Baltic region and Finland, could not have been of Uralic origin, because it

would have been too early for them. Consequently, Proto-Finno-Saami would not have disintegrated due to the arrival of the Northwest Proto-Indo-European-speaking Battle Axe culture. The disintegration must have taken place later and somewhere else, but not in the Baltic region. Furthermore, the language of the prehistorical Combed Ware culture could not have been of Uralic origin. Therefore, it is considered to be unknown.

Due to the different approach of the interdisciplinary research, Lang discussed the scenario proposed by A. Parpola (2012) that the Netted Ware culture was connected with the Seima-Turbino artefacts and that this implies that Pre-Proto-Saami likely came to southern Finland earlier. The reasons for his disagreement are various. The fact that Netted Ware as a prehistorical culture corresponds to Proto-West-Uralic and that the distribution of Seima-Turbino artefacts reflects a spread of groups of people with languages should be considered methodologically wrong.

Next, the people in today's Finland, Karelia and northwestern Russia in the second millennium BC were hunter-gatherers, and they could not have developed the social order and hierarchic structures necessary for a language shift¹⁷. Thus, it seems less likely to Lang that the tribes with Seima-Turbino backgrounds could have changed the language situation. Additionally, the number of Seima-Turbino artefacts is around 10, which is considered to be too low for a massive human movement as well as language changes. Therefore, it seems more plausible that these items were simply objects of a usual intertribal trade of prestige goods.

Another piece of material evidence from the same source is bronze axes found only in northern Fennoscandia. According to V. Lang, the Akozino-Mälar axes that were previously associated with the North-Western Passage as well as with the separation of Pre-Proto-Saami speakers a thousand years earlier more likely moved via the Volga to the

¹⁷ When the speakers of Pre-Proto-Saami arrived to today's Finland, Karelia and North-Western Russia, they met other Northern European tribes, whose language is unknown. A language shift has been mentioned, since it is expected that the Northern-European tribes switched their unknown language for the Pre-Proto-Saami language.

Dnieper and the Daugava and from there up to the Baltic Sea. For this southern route, Lang uses the term “South-Western Passage of Contacts” (Lang, 2015:68). Additionally, regarding the characteristic Akozino-Mälär axes, axes of another type, Anan’ino, spread at the same time through the North-Western Passage to northern Fennoscandia. Interesting to note is that both types of axe originate from the Volga region in the same types of cemeteries. Therefore, instead of the idea that one culture would have left the unity much earlier, it is again reasonable to suggest a contemporaneous movement westward, though indeed through different passages.

Among the Netted Ware archaeological culture, two different groups¹⁸ of pottery have been observed. These materials might be connected with the migration of Proto-Finnic populations, since they have been found in the regions extending from the Moscow area to the Baltic Sea, approximately from 2000–300 BC. One type of pottery was found in various places in the Volga region, and the other was found in the Volga region in the Yaroslavl and Kostroma districts. The peculiarity is that when the later Finnish as well as Baltic pottery styles (Asva, Paimio, Sarsa, Lügänuše, Ilmandu, Morby) are compared with the pottery found in the Volga and Oka-Moscow rivers, they seem to be similar to those of the Netted Ware’s group. Another type of pottery (Kalmistomäki, Luukonsaari, Volkhov) found later from groups that had spread into inland Finland, Karelia and between Lake Ladoga and Ilmen is also similar to the second style of pottery. Both types of pottery are labeled as Tapiola Ware (Lang, 2018).

Based on the strong archaeological evidence, V. Lang suggests a new hypothesis. Since it has been proven that the Textile Ware culture had two different groups of Tapiola Ware pottery with common roots, it could be assumed that they had developed in different directions and spread to the west through different routes. Consequently, it could be

¹⁸ The two groups have been identified by different pots. One group can be characterized by a flat or rounded bottoms, textile impressions that covered all the bodies and their decoration consists mostly of rounded pits and comb stamps. The other group’s pots have only round bottoms, possess more decoration motives, which are more complicated in comparison with the first group

interpreted that one branch, approximately during the second quarter of the second millennium BC, spread from the middle and upper Volga region through the North-Western Passage to Karelia and Finland, in approximately the middle of the second millennium BC. The other branch, then, spread from the middle Oka and Moscow rivers through the South-Western Passage to the southeastern part of the eastern Baltic, afterward to western and northern Estonia and lastly to southwestern Finland approximately in the last quarter of the second millennium and at the turn of the first millennium BC.

Thus, two different cultural regions have been formed: one in the territories of today's Latvia, Estonia, Finland and northwestern Russia and the second cultural region in most of Latvia, Estonia and Finland.

For the most part, combining linguistics with archaeology, it is comprehensible that the Western Uralic dialect, or the last common language unity of Finnic and Saami, had its homeland in the region near the Volga, Oka and Kama rivers. From this, two tribal groups gradually began to migrate to the west, and these migrations involved numerous waves of migration lasting centuries. One group shifted through the North-Western Passage during the second and third quarter of the second millennium BC by using water routes, and it reached today's Finland relatively quickly. The other tribal group began to shift westward by also using water routes a little later, in the fourth quarter of the second millennium BC through the South-Western Passage.

In the end, "both branches of Cultural traits met each other once again somewhere in Finland a few centuries after the beginning of the movements" (Lang, 2015:69)

VIII. Conclusion

The goal of my master's thesis was to collect, summarize and analyze all of the arguments either in favor or against a common Proto-Finno-Saami language.

In the theoretical part, the Finno-Saamic relation has been presented, and light has been shed on the research on the affinity. In addition, the reconstructed language has been presented.

Afterward, the following chapters were dedicated to the arguments, which were grouped based on their nature. Under the phonological arguments, CG, the labial vowel in the noninitial syllable and the loss of initial **v* has been discussed. Of these, the origin of the CG has been the most discussed argument, and still no common agreement has been found. There are enough arguments against a Finno-Saamic innovation; it is possible for the CG to be an old phenomenon reaching back to Proto-Uralic or being a Germanic influence, or it could even be a lost trace of an ancient Saami-Samoyedic connection. On the other hand, the CG is understandable as a possible innovation of the common Proto-Finno-Saami language that began as a pure phonetic feature and later penetrated, due to various sound changes, into phonology.

Concerning the labial vowel in a noninitial syllable, it seems that there is not enough evidence to consider it older than the Finno-Saamic phase. Based on contemporary etymological studies, a considerable number of words can be traced back to the same common form.

The loss of initial **v* occurs uniformly in the Finnic as well as Saami languages as a result of vocalization. It has been suggested that this phenomenon occurred separately in both branches due to the difference in the Southern Finnic languages. It must be admitted, however, that examples that could account for a common Finno-Saamic innovation are still worth considering.

The morphological arguments all consisted of markers; the comparative, imperative, conditional and potential and infinitive markers. These have mostly developed from grammatical features operating in previous language stages, and as a common Proto-Finno-Saamic innovation, they developed further through analogy.

The fifth chapter, which was dedicated to syntactic arguments, was organized a little differently than the other arguments because all of the discussed syntactic features common to Finnic and Saami were presented on the basis of differences from or comparisons with the rest of the Uralic languages. These arguments, such as the agreement of adjective modifiers, SVO word order, copula and conjunctions, have leaned more toward being the result of long-lasting language contact with neighboring Indo-European languages. From these results, it can be understood that Finno-Saamic syntax is more likely a result of language contact, rather than a common innovation.

Concerning the lexical arguments in the sixth chapter, Saami and Finnic share approximately 220 word stems that are only limited to them and can be reconstructed back into a common proto-form. What is questionable, though, is to what extent the nativization of loanwords operated among the loans and how many of these 220 word stems are actually undetected borrowings. The loanwords showed that a few different (and well-fitting) scenarios can be applied to explain the similar stratification in both language groups. These do not directly offer strong arguments; however, the number of specific word stems can be, according to scholars, a strong basis for a common language form.

Lastly, interdisciplinary arguments have been discussed, but they must be considered carefully, since they comprise two different scientific disciplines, archaeology and linguistics. The goal of the last chapter was to present the older and newer research. The main differences lay in the proposed homelands. The older research was in favor of migration and continuation theories, in which prehistorical cultures were associated with linguistics. This led to diverse chronological correlations in both fields, until it could even be said that Finnic and Saami never formed one unity (besides Proto-Uralic), since

according to archaeological findings, the Saami branch would have separated from the rest early. According to the new research, which was based on aDNA results, a common point for a unity has been found in the region near the Volga, Oka and Kama rivers. From that point, two units have gradually spread through different passages. A few thousand years later, they met again on today's Finland.

Resources

- Aikio, Ante 2006: On Germanic-Saami contacts and Saami prehistory. – JSFOu 91: 9–55.
- 2007: Etymological nativization of loanwords. A case study of Saami and Finnish. - Ida Toivonen & Diane Nelson (eds): *Saami Linguistics. Amsterdam studies in the theory and history of linguistic science. Series IV. Current issues in linguistic theory.* Volume 288, Amsterdam p. 17–52
- 2012: An essay on Saami ethnolinguistic prehistory. A linguistic map of prehistoric Northern Europe, *Suomalais-Ugrilainen Seura*, Helsinki, p. 63-117
- 2019: Proto-Uralic. In Bakró-Nagy, Marianne; Laakso, Johanna; Skribnik, Elena (eds.). *Oxford Guide to the Uralic Languages*. Oxford, UK: Oxford University Press.
- Aikio, Ante & Aslak Aikio 2001: Heimovaelluksista jatkuvuuteen: suomalaisen väestöhistorian tutkimuksen pirstoutuminen. – *Muinaistutkija* 4/2001: 2–21.
- Bergsland, Knut 1946: L’alternance consonantique date-t-elle du lapon commun?” *Studia Septentrionalia* 2: p. 1-53
- Carpelan, Christian & Asko Parpola 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: Société Finno-Ougrienne. 55–150.
- Collinder, Björn 1945: The affinities of Lapp. - *Uppsala universitetets årsskrift* 1945: 12
- Grünthal, Riho 2019: “Ein Bedeutender Fortschritt in Der Erforschung Der Frühgeschichte Des Ostseefinnischen: (Valter Lang: Läänemeresoome Tulemised)”. *Finnisch-Ugrische Forschungen* 2018 (64), 334–342
- Heikkilä, Mikko 2012: On the Innovations in Early Proto-Finnic Vocalism and Phonotactics and their Dates. *Fenno-Ugrica Suecana Nova Series* 14, p. 1-30
- Helinski, Eugen 1995: Proto-Uralic gradation: continuation and traces. *CIFU* 8, p. 17-51
- Häkkinen, Jaakko 2007: *Kantauralin murteutuminen vokaalivastaavuuksien valossa*. Master’s thesis. Helsinki.
- 2009: Kantauralin ajoitus ja paikannus: perustelut puntarissa. *Suomalais-Ugrilaisen Seuran Aikakauskirja*, 2009(92), p. 9–56
- Itkonen, Erkki 1946: *Struktur und Entwicklung der Ostlappischen Quantitätssysteme*. *Suomalais-Ugrilainen seura*, Helsinki

- 1954: Über die suffixalen Labialvokale im Lappischen und Ostseefinnischen. - Scandinavica et Fenno-Ugrica. Studier tillägnade Björn Collinder den 22 juli 1954. Uppsala: Almqvist & Wiksell. 183–191.
- 1955: Die Herkunft und Vorgeschichte der Lappen im Lichte der Sprachwissenschaft. UAJb XXVII.32-44
- 1957: Suomalais-ugrilainen kantakielen äänne- ja muotorakenteesta, in: *Virittäjä* 61, 1957, p. 1–21
- 1962 Die Laut- und Formenstruktur der finnisch-ugrischen Grundsprache. UAJb XXXIV. p. 187-210.
- 1966: Suomalais-Ugrilaisen kielen- ja historian tutkimuksen alalta. SKS, Helsinki
- 1969: Zur Wertung der finnisch-ugrischen Lautforschung, in: *Ural-Altaische Jahrbücher* 41, p. 76–111

Itkonen, Terho 1997: Reflections on Pre-Uralic and the “Saami-Finnic protolanguage”. *FUF* 54: 229–266

- 1983: Välikatsaus suomen kielen juuriin. *Virittäjä*, 87(2), p. 190

Janhunen, Juha 1982: On the structure of Proto-Uralic. – *FUF* 44: 23–42.

- 2009: Proto-Uralic-what, where, and when. The quasiquicentennial of the Finno-Ugrian society 258, p. 57-78
- 2018: Issues of comparative Uralic and Altaic Studies (4): On the origin of the Uralic comparative marker. – Angela Marcantonio (ed.), The state of the art of Uralic studies: tradition vs innovation. Proceedings of the ‘Padua Uralic seminar’, University of Padua, November 11–12, 2016. Roma: Sapienza Università Editrice. p. 49–57

Kallio, Petri 2000: Posti’s superstrate theory at the threshold of a new millennium. Facing Finnic – Some challenges to historical and contact linguistics, Johanna Laakso (ed.) p. 80

- 2006: Suomen kantakielten absoluuttista kronologiaa. *Virittäjä* 110, Helsinki p. 2-25
- 2007: Kantasuomen konsonanttihistoriaa. – Jussi Ylikoski & Ante Aikio (eds): *Sámit, sánit, sátnehámit. Riepmočála Pekka Sammallahtii miessemánu 21. beaivve 2007.* MSFOu 253: 229-249.

Koivulehto, Jorma 1983: Suomalaisten maahanmuutto indoeurooppalaisten lainasanojen valossa. – *JSFOu* 78: 107-132.

Koivulehto, Jorma & Vennemann, Theo 1966: Der finnische Stufenwechsel und das Verner’sche Gesetz. In: *Beiträge zur Geschichte der deutschen Sprache und Literatur*. Nr. 118, 1996, S. 163–182

Korhonen, Mikko 1974: Oliko suomalais-ugrilainen kantakieli agglutinoiva?. *Virittäjä*, 78(3), 243

- 1981: Johdatus lapin kielen historiaan. Helsinki: Suomalaisen Kirjallisuuden Seura.
- 1986: Finno-Ugrian Language Studies in Finland, 1828-1918, Band 11: History of learning and science in Finland, Societas Scientiarum Fennica, Helsinki

- 1988a: History of the Lapp language. In Denis Sinor (ed.), *The Uralic languages: description, history and foreign influences*, p. 264-287
- 1988b: The Lapp Language. History of the Lapp language. In Denis Sinor (ed.), *The Uralic languages: description, history and foreign influences*, p.41-58
- Kulonen, Ulla-Maija, Irja Seurujärvi-Kari, Risto Pulkkinen, 2005: *The Saami - A Cultural Encyclopaedia*, SKS, Helsinki
- Kuokkala, Juha 2012: *Jälkitavun labiaalivokaalit saamessa ja itämerensuomessa*. Master's thesis. Helsinki.
- 2018: Finnic-Saamic labial vowels in non-initial syllables: An etymological evaluation. *Uusiutuva uralilainen etymologia. Uralica Helsingiensia* 11. Helsinki, p. 11-74.
- Laakso, Johanna 2001: Native or borrowed, or both—is it possible to have many mothers?, *Word*, 52:2, p. 197-212
- 2001 : *The Finnic languages. The Circum-Baltic Languages: Typology and Contact*, Band 1. Östen Dahl, Maria Koptjevskaja-Tamm (ed), John Benjamins Publishing Company, Amsterdam/Philadelphia. p. 179-212
- Lang, Valter 2015: Formation of Proto-Finnic – an archaeological scenario from the Bronze Age / Early Iron Age. – *Congressus Duodecimus Internationalis Fenno- Ugristarum*, Oulu 2015. Plenary Papers. Eds H. Mantila et al. University of Oulu, 63–84.
- 2018: *Läänemeresoome tulemised. Muinasaja teadus* 28. Tartu Ülikooli Kirjastus, Tartu
- Lehtinen, Tapani 1983: Suomen konditionaalin morfologisesta ja semanttisesta motivaatiosta. *Virittäjä*, 87(4), p. 482.
- 2007: *Kielen vuosituhanet. Suomen kielen kehitys kantauralista varhaissuomeen*. Tietolipas 215. Helsinki: Suomalaisen Kirjallisuuden Seura.
- Lehtisalo, Toivo 1936: Über die primären uralischen Ableitungssuffixe. *MSFOu* 72.
- Nahkola, Kari 1995: Miksi astevaihtelu fonemaattistui? *Virittäjä* 2/1995, p. 173-190
- Page, Richard B 1998: Verner's Law. *Beiträge zur Geschichte der deutschen Sprache und Literatur* 122 (2), p.175-193
- Parpola, Asko: 2012: Formation of the Indo-European and Uralic (Finno-Ugric) language families in the light of archaeology: Revised and integrated 'total' correlations. – Grünthal, R. & Kallio, P. (eds) 2012, 119–184.
- Posti, Lauri: 1953: From Pre-Finnic to Late Proto-Finnic. *FUF* XXXI. p. 1-91

Ravila Paavo 1935: Die Stellung des Lappischen innerhalb der finnisch-ugrischen Sprachfamilie. – FUF 23: 20–65

— 1937: Über das finnisch-ugrische Komparativsuffix. FUF XXIV, p. 29-58

— 1941: Über die Verwendung der Numeruszeichen in den uralischen Sprachen. FUF XXVII, p. 1-136

— 1951: Astevaihtelun arvoitus. Virittäjä, 55, p. 292-300

— 1957: Lappalaisten ja lapin kielen ongelmia. SuSuomi 1957.465-9.

— 1960: Probleme des Stufenwechsels im Lappischen, FUF 30/3, p. 285-325

Rießler, Michael 2006: Die Evolution attributiver Markierungen im Nordgermanischen. In Antje Hornscheidt, Kristina Kotcheva, Tomas Milosch & Michael Rießler (eds.), *Grenzgänger. Festschrift zum 65. Geburtstag von Jurij Kusmenko* (Berliner Beiträge zur Skandinavistik 9), 258–274. Berlin: Humboldt-Universität zu Berlin

— 2016: Adjective attribution. *Studies in Diversity Linguistics* 2, Berlin

Saarikivi Janne & Mika Lavento 2012: *Linguistics and Archaeology. A Critical View of an Interdisciplinary Approach with Reference to the Prehistory of Northern Scandinavia*. – Charlotte Damm & Janne Saarikivi (eds), *Networks, Interaction and Emerging Identities in Fennoscandia and Beyond*. MSFOu 265. Helsinki: Société Finno-Ougrienne. 177–216.

Sammallahti, Pekka 1984: Saamelaisten esihistoriallinen tausta kielitieteen valossa. – Jarl Gallén (ed.) *Suomen väestön esihistorialliset juuret. Tvärminnen symposiumi 17.–19.1.1980. Bidrag till Kännedom av Finlands Natur och Folk* 131. Helsinki: Societas Scientiarum Fennica. 137–156.

— 1988: Historical phonology of the Uralic languages. – Denis Sinor (ed.): *The Uralic languages*. Leiden: Brill. p. 478-555

— 1998: The Saami languages – An introduction. Kárášjohka: Davvagirji.

— 1999 Saamen kielen ja saamelaisten alkuperästä. – Paul Fogelberg (ed.): *Pohjan poluilla. Suomalaisten juuret nykytutkimuksen mukaan. Bidrag till kännedom av Finlands natur och folk* 153. Helsinki: Societas Scientiarum Fennica. 70–90.

Setälä, E. N 1891: *Yhteissuomalainen äännehistoria. Suomalaisen Kirjallisuuden Seuran Kirjapainossa*, Band 1. University of Wisconsin

— 1896: Über Quantitätswechsel im Finnisch-ugrischen. *Journal de la Société Finno-Ougrienne* 14(3)

— 1909-1912: Über Art, Umfang und Alter des Stufenwechsels im Finnisch-ugrischen und Samoyedischen, Vorläufige Mitteilung, *Finnisch-Ugrische Forschungen* 12 (Anzeiger): p. 1-128.

Schefferus, Johannes 1674: *Lapponia*. Translated by Tuomo Itkonen

Stiper, G. J 1990: *Finnisch-Ugrische Sprachforschung von der Renaissance bis zum Neopositivismus*. MSFOu 206

Suhonen, Seppo: Geschichte der ostseefinnischen Sprachen, – Denis Sinor (ed.): The Uralic languages. Leiden: Brill. p. 288-314

Taagepera, R. 1994: The linguistic distances between Uralic languages. LU **30**: 161-167

Toivonen, Yrjö Henrik 1946: Protolapin ongelmasta. Suomen Tiedeakatemia Esitelmät ja Pöytäkirjat, p. 159-183

—1950: Zum Problem des Protolappischen. Commentariones Instituti Fenno-Ugrici „Suomen Suku“ XVI. Helsinki

Turunen, Aimo 1988: The Balto-Finnic Languages, – Denis Sinor (ed.): The Uralic languages. Leiden: Brill. p. 58-84

Vilkuna, Maria 1997: Word Order In European Uralic. In Constituent Order in the Languages of Europe, ed. By Anna Siewerska, 173-233. Berlin: Mouton de Gruyter.

Wiklund, K. B. 1891: Laut- und Formenlehre der Lule-Lappischen Dialekte. Kongl. Vetenskaps och Vitterhets Samhälles 25, Gothenburg

— 1896: Entwurf einer urlappischen Lautlehre. Mémoires de la Société Finno-Ougrienne X. Helsinki: Société Finno-Ougrienne

Ylikoski, Jussi 2018: The so-called relation forms of nouns in South Saami: A byproduct or remnant of Uralic *-mpV?, FUF 64, p. 6-71

Internet resources

- Institute for the languages of Finland: <https://www.kotus.fi/>
- Iso Suomen Kielioppi: <https://kaino.kotus.fi/visk/etusivu.php>