Pekka Sammallahti

Giellagas Institute
University of Oulu, Finland

Bottlenecks and Contacts in the Linguistic Prehistory of the Saami

Introduction

The aim of my paper is to shed light on the contacts of a small group of closely related languages in northernmost Europe, the Saami languages, and on what can be known about these contacts. The ancestors of the Saami as those of all modern human groups have their roots ultimately in Africa, and on their way to the northernmost extremes of our continent they have been in contact with various other groups of people long before their present ethnic identity was formed.

Where Does Human Communication Fit in?

Among the signalling systems, human language excels through it's power of getting a wide variety of messages across. Apes learn to use restricted sign languages with several hundred symbols with humans but don't seem to be very active in transferring their knowledge to the next generation. Dogs and horses are known to learn and react properly to almost a hundred different human signals which we call words, and some birds – such as the African grey parrot – learn to use a limited oral language with humans, a language with words for more than a hundred basic concepts and even combinations of these words to express and understand more complex ideas than those single words themselves relate (Pepperberg 2006).

So it is a completely plausible conclusion that even the predecessors of modern humans communicated with each other through signalling systems. We don't know if or when these systems could be called languages in the modern sense of the word. No other species is known to possess or have possessed a communication system as versatile as that of modern humans, and the present human languages show equal complexity all over the world.

The cultural differences between human societies are reflected in the lexical resources of their languages. Some languages – and cultures – can do with words for twenty thousand concepts whereas those in complex societies may

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have words for a million concepts and even beyond. A single individual in a complex society masters only a fraction of these whereas in a simple culture practically all the concepts are common property. The numbers of basic word stems – the basic lexical building blocks of vocabulary – don't vary as much: in normal human languages they range from some three thousand to maybe twenty thousand in extreme cases. Even the lowest of these figures clearly exceeds the number of similar items in other natural communication systems.

So we may very well suppose that the complexity of the communication systems of our early predecessors before the emergence of modern humans were somewhere between those of other primates and those of the present humans. Their cognitive capabilities very likely contained thousands of concepts – ideas of the entities, properties, situations and processes in their physical, cultural, societal and psychological environment.

What we don't know for certain – and probably never will – is, if hominids had language in the sense we have. We know that the Neanderthals had many morphological and genetic preconditions for language. Lieberman and Crelin's argument against Neanderthal speech (Lieberman & Crelin 1971) has been confronted with new reconstructions of the vocal tract and hyoid bone finds in skeletal remains. What we don't know is if other physiological conditions for producing speech – those having to do with the neural system – were present.

The first humans with Neanderthal traits came to Europe maybe 500.000 years ago and persisted here to the end of the last interglacial about 25.000 years ago. Their presence overlapped with that of modern humans who arrived in Europe 35.000 years ago at latest. The Neanderthals definitely had culture which is reflected in the production of tools, ornamentations and burials. But was Neanderthal communication comparable to ours, did they possess language in the same sense as we do?

Limited Modalities

Considering the extremely slow pace of cultural evolution in comparison with modern humans it seems fairly safe to say that the Neanderthals did not communicate with each other in the same ways we do. Slow cultural development indicates that they did not discuss possibilities for innovations in technology nor for new uses of the environment to the extent that modern humans do. They may have coordinated many of their activities through vocal communication but they probably lacked many such properties of language which pertain to expressing and discussing opinions, visions and abstract things. In linguistic terms, their ability to handle epistemic modalities must have been severely restricted even if they probably had ideas based on dynamic and maybe deontic modalities very much like those we have and communicate among ourselves.

Dynamic modalities are basic properties of any communication system because they are about wishes and refusals which are necessary for the survival

of all animals with brains. These modalities are a psychological necessity and they are those that children acquire first. They find their expression in words and phrases for wanting and liking such as *I want to go, I don't want to go, I must get it*. Deontic modalities are about social matters, permissions, necessities and prohibitions, and they are basic for the existence of societies. The expression of deontic modalities come later in human postnatal development than the expression of the dynamic ones. They are felt in such words and phrases as *you may, we must, please* and *thank you*. Finally the epistemic modalities have to do with aspects of truth and existence. They develop latest in children and are expressed by words like *certainly, probably, likely, obviously, perhaps, I believe, I doubt it, there must be, there will be, there won't be.* (von Wright 1951).

Epistemic modalities are a basic property of our languages and they clearly distinguish human language from the communication systems of other species. Their central aspect is the ability to view situations and other abstract objects, in addition to concrete objects, as entities. This property is one of the factors which make human language infinite and allows for the expression of complex ideas which may have never been uttered before.

So we may be fairly confident in saying that language in the sense we use it was brought from Africa to Europe by modern humans who arrived here 45.000 years ago.

Encounters in Europe

The first foreign member of the *Homo* genus modern humans met on their exodus was probably the Neanderthals. There must have been encounters between the populations but we know very little about them. We know that human languages have acquired linguistic items from the communication systems of other mammal species such as cats, dogs and cows and some bird species such as the cuckoo, but we don't know if there are any similar acquisitions from Neanderthal communication. The cultures and communication systems may have been too far apart to produce cooperation which would have led to an exchange or borrowing of linguistic elements.

In many ways, the latest Ice Age with its maximum about 18.000 years ago was the second linguistic, cultural and genetic bottleneck in human prehistory after the exodus from Africa. When the climate grew colder, the human population withdrew to more friendly habitats in the south, and a number of so-called ice-age refuges were formed. Most of these were conglomerates and must have contained people from different linguistic, cultural and genetic units, and when these came together, new units were formed at the cost of older ones.

Given the size of the Ice Age population in Europe – maybe less than ten thousand – the number of linguistic groups cannot have been too large and their number probably didn't exceed that of the ancestors suggested by genetic research. Less than ten linguistic traditions – languages or families of related lan-

guages – is therefore a safe minimal estimation for Ice Age Europe. The number of Ice Age refuges is a little smaller than that, but it is possible that the larger refuges in northern Spain and north of the Black Sea contained more than one linguistic group.

Europe is an area where languages have been in constant contact for a long time. These contacts are reflected both in the loanwords found in Europe's languages and – to a some extent – in their structure. Especially the political developments and closely related administrative systems of the second millennium of the present era have made Europe to become a *Sprachbund* area which also comprises its non-Indo-European languages.

Converging Negations

A striking example of the European *Sprachbund* is the development of negation in many Finno-Ugric languages and their dialects. In Europe two fundamentally different systems of negation met, the Indo-European negation and the Uralic one. The Indo-European negation uses particles; these are operators and function as dependents to the words and phrases they negate. Almost all word classes can be negated, and the Indo-European negation is therefore very versatile and its scope can be narrowed down to a single word of a sentence.

The original Uralic negation word, however, is an auxiliary verb which only assigns other verbs as its dependents. The scope of the Uralic negation is therefore the whole situation set by the predicate of the sentence. This is the reason why the Finnish sentence

(F1)	*Matti*	*ei*	*nähnyt*	*siellä*	*autoa*.
	Matthew	not-s/he	seen	there	car
(F2)	*Minä*	*en*	*nähnyt*	*siellä*	*autoa*.
	I	not-I	seen	there	car

corresponds to at least the following sentences in English:

(E1a) *Matthew saw no car there.*
(E1b) *Matthew didn't see a car there.*
(E2a) *I saw no car there.*
(E2b) *I didn't see a car there.*

The Finnish words *en* 'I not' and *ei* 's/he not' are finite conjugational forms of the negative verb. The English sentences (E1b) and (E2b) contain a negation of the predicate through the negation by *-n't* of the auxiliary *(did)* and its negation is equivalent to the Finnish sentences (F1) and (F2) in scope and meaning ('there was no such situation'). The English sentences (E1a) and (E2a) describe a situ-

ation which is within the scope of the sentences (E1b) and (E2b) but correspond to one of their possible interpretations: only the existence of the car is negated.

The negative verbs in the Northern Samoyed languages of western Siberia and the Southern Samoyed language Kamass show a morphology which is identical with or similar to that of content verbs and one can assume that this was the original situation in Proto-Uralic which is the most remote reconstructable protolanguage for the Finno-Ugric and the Samoyed languages. The same kind of morphology is also found in the Volgaic languages Mordvin and Mari of Central Russia which also belong to the Uralic phylum.

The interesting thing is that there is a drift away from auxiliary negation. In the north-western languages of the Uralic family, the Finnic and Saami languages, the negative verb shows reduced mood morphology and has a common series of forms for the indicative, potential and conditional moods which contrasts with the forms of the imperative. Furthermore, the negative verb lacks infinitives and participles in Finnic and Saami but these may have been present in the past as suggested by the Finnish prefix *epä-* 'un-' (< negative verb stem *e-* + imperfect participle marker *-pa/-pä*) and the Samoyed non-finite forms of the negative verb such as the Nenets infinitive *нись* (= stem *ни-* + infinitive marker *-сь*).

The next step is the morphological reduction of the personal forms of the negative verb. Estonian and some Finnish dialects have one form for all persons and numbers in the non-imperative moods (Estonian *ma ei tulnud* 'I didn't come', *sa ei tulnud* 's/he didn't come'). It is obvious that this single form is still a finite form since the main verb shows the same non-finite forms which are found in those Finnic languages in which the negative verb has contrasting personal forms (Finnish *en tullut* 'I didn't come', *et tullut* 'you didn't come' etc., c.f. Estonian finite forms in *ma tulin* 'I came', *sa tulid* 'you came' etc.).

Hungarian is the Finno-Ugric language in Europe whose negation completely harmonizes with the surrounding Indo-European languages. Hungarian has negative particles and the main verb of a negated sentence is in a finite form and not a non-finite connegative as in the rest of the Finno-Ugric languages of Europe.

Language Contacts

As clear as the overall Uralic characteristics of the Saami languages is, it is obvious that some of the ancestors of the present Saami spoke a language or languages of a different origin and elements of this substrate language are found in Saami. It is an established archaeological fact that there have been two principal population currents to the north, one from the south-west along the Norwegian coast and the Scandinavian inland and the other from the south-east through Finland and Karelia. The latter represented Uralic and probably also para-Uralic linguistic traditions more or less related to it.

The Mesolithic cultures of north-eastern Europe had spread to the area from the south-west. Archaeologically they seem to be descendants of or at least related to the late Paleolithic Swiderian culture in what is present Poland. The Swiderian cultural area is therefore a good candidate for the original homeland of the linguistic tradition which gave birth to the Uralic family of languages. Later on the pre-Uralic languages spread to the whole area between the Baltic Sea and the Ural mountains. Later one of these evolved into the Uralic proto-language which expanded to whole area, and the para-Uralic linguistic traditions in the area became extinct, possibly with a number of other minor groups. Ultimately these archaeological cultures seem to derive from the south-eastern refuge around the Black Sea during the last Ice Age maximum.

The possibility to find pre-Indo-European substrate elements in present Indo-European languages of the west and Finno-Ugric languages such as Saami in the north is largely but not completely unexplored. As for the Saami area, Ante Aikio's recent study of place names (Aikio 2004) is an important contribution. He arrives at the conclusion that many of the inexplicable single-constituent Saami place names in the coastal area stem from a substrate language.

It is likely that many of the Saami basic word stems with no Uralic or loan etymology derive from non-Uralic idioms spoken by early immigrants to the Saami area, even if they cannot be identified at the moment. Some of these stems may, however, belong to those which have been forgotten in the rest of the Uralic or Indo-European languages so that substrate origin is not the only possibility.

In morphology very few non-Uralic elements have been traced in Saami. The South Saami 3rd person present tense suffixes *-s* and *-vies* as in *leas* ~ *lievies* 'they are' are good candidates. The suffix *-vies* cannot be related to the Finnic suffix *-va-/-vä-* in *menevät* 'they go' since the consonant *-v-* in the Finnic suffix goes back to the stop **p* and the South Saami reflex of this sound would be a stop, not the fricative *v*. Another candidate is the Western Saami 3rd person dual suffix element **-kaa-/-Gaa-* found in such possessive forms as *goahtiska* < **koatee-s-kaa-n* 'the hut of the two of them' and in past tense verb forms such as *boðiiga* < **poaDij-Gaa-n* 'the two of them came'; the **s*-element in *goahtiska* is the third person possessive element and the element **n* in both is the dual marker.

In addition to words with cognates in related languages and loanwords, The Saami lexicon contains hundreds of basic vocabulary items which have no etymology (cf. Lehtiranta 1989), such as those in this list:

atnit 'to use'
bivvat 'to keep warm'
boahtit 'to come'
coagis 'shallow'
čáhppat 'black'
čiekčat 'to kick'
guvžá 'sea trout'
heavdni 'spider'
jalŋŋis 'tree stump'
láhppit 'to lose'
nagir 'sleep'
ohca 'bosom'
oakti 'rain shower'
ravgat 'to fall, to collapse'
soahki 'birch'
šiehttat 'to make an agreement'
uhcci 'small'

A couple of fairly certain substrate words can be posited. The North Saami areal variants *diksu* and *juksu* as well as the Norwegian word *hyse* all refer to haddock (a species of cod) but the variation in form cannot be explained on the basis of any Saami or Norwegian original or sound change. Even if we cannot point to any specific source, the variants must be substrate words in both Saami and Norwegian. (Kylstra 1962.)

Another case seems to be the Saami word for skiing, *čuoigat*, which has no Uralic etymology but is a perfect match with the Indo-European root **k´āik-* ~ **k´īk-* which means 'to jump' (Pokorny 1959: 522) – the earliest documents on the Saami say that they move by jumping on the snow with long pieces of wood. The confinement of this word to the westernmost Indo-European languages points towards a loan origin. The obvious conclusion is that it originates from an extinct language which was spoken in westernmost Europe at the time of the arrival of the Indo-European languages. The speakers of the same extinct language also travelled north along the Norwegian coast and brought the word into the Saami area.

The Saami languages also have a large number of loanwords from neighbouring languages. The oldest of these are Indo-European loanwords of different ages. They are important evidence in the attempt to reconstruct the expansion routes of Saami into the areas where it is spoken or is known to have been spoken. Latest research has identified their provenience in the different branches of the Indo-European language family (cf. Sammallahti 1998: 125–130). Their semantics obviously tells something about the nature of the contacts which led to to their borrowing, and the examples were chosen with these cultural influences in mind:

70 Proto-Indo-European loanwords (c. 15 independent):

čearda 'tribe'
čohkut 'to comb'
earti 'sloping bottom'
fanas 'boat'
fierbmi 'net'
gálojeatni 'husband's brother's wife'
gođđit 'to weave'
lohkat 'to count'
miõkkâd 'to sell' (Skolt Saami)
namma 'name'
njađđit 'to tack on'
reašmi 'net rope'
sohka 'kin'
veaiki 'copper'
vuodjit 'to drive'
vuogga 'lure'

7 Proto-Aryan loanwords (3 independent):

čáris 'coarse (of wool)'
čuohti 'hundred'
vuodja 'butter, fish oil'

20 Old Indo-Aryan loanwords (6 independent):

boarti ‘birch bark vessel’
goahti ‘hut, dwelling’
oarbbis ‘orphan’
soabbi ‘stick’
veahčir ‘hammer’
vue´rr ‘awl’ (Skolt Saami)

4 Proto-Slavic loans (all independent):

guoppar ‘mushroom’
multi ‘soap’

40 (Proto-)Baltic loanwords (9 independent):

daktere ‘daughter’ (South Saami)
gahpir ‘cap’
guksi ‘dipper’
guoibmi ‘companion’
luossa ‘salmon’
luovdi ‘wooden float’
luovvi ‘scaffolding with floor’
návdi ‘wolf; fur animal’
neahpi ‘a man’s nephew or niece’
sasti ~ sisti ‘chamois leather’
searvi ‘society’
soallut ‘to pick teeth’
šuvon ‘clever dog’ (cf. *beana* ‘dog’< Proto-Finno-Ugric)
vuossi ‘pot handle’
vuovji ‘wedge’

30 Proto-Germanic loanwords (15 independent):

borjjas ‘sail’
dordnu ‘door’
gieddi ‘field, clearing’
gieggi ‘wooden shoe (under a runner)’
luoikat ‘to borrow’
roavgu ‘skin rug’
ruovdi ‘iron’
sággi ‘pin’
vuotta ‘brogue-band’

20 Germanic loanwords (12 independent):

ruoksi ‘udder’
ruovji ‘part of carcass’
vierca ‘ram’
gáldu ‘natural well’
gáma ‘shoe’
vuoksi ‘depth of a fishing net’
láigu ‘rent’

Several hundred Proto-North-Germanic loanwords:

áiru ‘oar’
ákšu ‘axe’
árbi ‘legacy’
bárdni ‘son, boy’
bodni ‘bottom’
didnu ‘flint’
dilljá ‘floor-board’
fáhcca ‘mitten’
fárju ‘canvas’
fiellu ‘board’

gáhkku ‘bread’
gáica ‘goat’
gárdi ‘corral’
gussa ‘cow’
lávgut ‘to bathe’
máhka ‘brother-in-law’
náhppi ‘milking bowl’
niibi ‘knife’
nuohtti ‘seine’
rátnu ‘rug’
sáidi ‘coalfish’
sávza ‘sheep’
silba ‘silver’
ullu ‘wool’
vuostá ‘cheese’

Several hundred Proto-Finnic loanwords:

áiti ‘store house’
árga ‘weekday’
báidnit ‘to dye’
boallu ‘button’
deallut ‘to remove grease from skin’
diehtit ‘to know’
doaivut ‘to hope’
gáibmi ‘namesake’
geahpa ‘net-needle’
jahki ‘year’
lávlut ‘to sing’
lihttu ‘meeting agreement’
meahcci ‘woods, bush, hunting grounds’
moarsi ‘bride’
oastit ‘to buy’
seaidni ‘house wall’
šalbmi ‘eye of needle’
šimir ‘back of knife, axe’
vealgi ‘debt’
vearru ‘tax’
vuorru ‘turn’

Additionally:

— thousands of young loanwords from Swedish and Norwegian
— thousands of young loanwords from Finnish and Karelian
— Russian loanwords (several hundred in the east, a handful in the west down to Ume Saami)
— English loanwords (an increasing number in different jargons)

Where Did They Meet?

The oldest layers of Indo-European loanwords are probably more than 5000 years old and therefore comparable to the old Uralic and Finno-Ugric strata of indigenous words. The geographical distribution of the two are, however, quite different. The old indigenous words show an even distribution and are found in practically every Saami variant whereas the loanwords show a relatively narrow and more random distribution and seem to be confined to the central Saami languages Lule, North, Inari and Skolt Saami (Sammallahti 2001).

One explanation to the distribution difference between the old indigenous vocabulary and the oldest loanwords is that they were acquired after the Saami languages spread to their present areas in the north. One can also find a very

probable context for their acquisition in the economic boom around 3000 BC in the northernmost extension of the Baltic Sea, Gulf of Bothnia (*Bottenhavet* in Swedish), when there was an exceptionally warm climate for several hundred years and the seals of the Baltic Sea gathered to the north to brood. The seal oil production of the Baltic Sea was concentrated to this northern area which had lively economic contacts with the southern shores of the Baltic where speakers of Indo-European already lived. From the northern parths of the Gulf of Bothnia the loanwords radiated to the inland along the main rivers in the area.

There is also an alternative explanation according to which the Proto-Indo-European loanwords were initially adopted into an unknown language which was spoken in the area prior to the arrival of the Finno-Ugric-speaking groups. The unknown language was replaced by the language of the newcomers but some substrate words remained as traces of this replacement. The loanwords, however, show no exceptional substitution patterns and as a third alternative one can assume that the language they were adopted into belonged to the Finno-Ugric dialectal continuum and may have constituted one of the variants which later developed into the present Saami languages. Even if the formation of the Proto-Saami language would have taken place somewhere closer to the south-eastern shores of the Baltic, it is obvious that many of the language variants it replaced or rather integrated when expanding were para-Saami dialects and only a few steps away from Proto-Saami.

Others scholars, like Christian Carpelan (Carpelan 2000) and Jorma Koivulehto (Koivulehto 1999) who combine archaeological and linguistic data, see a late Neolithic expansion into the north and a subsequent movement to the south-west during the Bronze Age. Others still, like Ante and Aslak Aikio, think that the Saami expansion to the north and further to south-west from an original homeland in southern Karelia is later still (Aikio & Aikio 2001). This scenario is possible if one thinks of it not so much as an expansion of a linguistic group but as a diffusion of linguistic innovation in a continuum of related dialects in the sparsely inhabited North.

An open question is, when did the Saami or para-Saami groups reach central Scandinavia. Some archaeologists think this happened in the beginning of the Bronze Age at latest, and others think that the south-western expansion took place during the Bronze Age. Linguistically a *terminus ante quem* is 400 AD: many South Saami place names of Scandinavian origin were adopted before Proto-Scandinavian sound changes that happened around that time (Bergsland 1995).

In addition to Indo-European and Finnic loanwords in Saami, there are also Saami loanwords in the surrounding languages. According to Ante Aikio's recent study, about 60 certain Saami loanwords can be pointed out in the central and southern dialects of Finnish and Karelian (Aikio 2009). Swedish has a few Saami loanwords, and one of the loanwords into Russian such as *tundra* has found its way into international use. In addition, a great number of place names of Saami origin are found outside the historical Saami area in southern Finland and Karelia.

Contact Languages

Apart from lexical and grammatical influences, the study of specific contact languages called pidgins is a subfield of contacts research. The best known pidgin in the European Arctic is *Russenorsk* or *Moja-på-tvoja* (meaning roughly 'mine in your way'). It was used between Russian traders and farmer-fishermen of the northernmost Norwegian coast (Broch & Jahre 1984). As the name indicates, it was based exclusively on Russian and Norwegian vocabulary even if the Saami also participated in the trade. The first Russenorsk words were attested no earlier than in the 18th century which indicates that its use began when the key sites of the Norwegian coast were already inhabited by Norwegian-speakers. It fell out of use in the 1920's soon after the Russian revolution in 1917, and Russenorsk went into oblivion. As late as 1979 I met an old Sea Saami lady in Altafjord in northernmost Norway who could still count in the Russian numerals of the language.

Even if Russenorsk is a relatively old pidgin and exceptional because of its northern location and egalitarian context, it is obvious that there was an earlier pidgin in the more southern reaches of the Saami area, and that this pidgin was to a great part based on Saami vocabulary. The first printed books in Saami were published in 1619. The quality of their language has been generally criticized (Qvigstad & Wiklund 1899: 11) but it is clear that these books represent no organic Saami variant of their time and that its characteristics are typical of a pidgin. The importance of these books is not so much in documenting Saami as a language but because it's the world's oldest document of a pidgin, at least to my knowledge.

This early pidgin concludes the short survey of the linguistic contacts of the Saami and their linguistic predecessors and what can and what cannot be said about them. We have seen that historical linguistics is contact research *par excellence* and that historical linguistics provides lots of interesting data for contact research. And finally, historical linguistics also provides explanations to what happens when languages get into contact with each other and – through the meanings of the borrowed items – what these contacts are about.

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