A history of Northern Samoyedic: adding details to the dialect continuum hypothesis[1]

Olesya Khanina

University of Helsinki

Eugen Helimski pointed out a striking peculiarity in the historical development of Northern Samoyedic: never-ending contacts between various groups and thus a dialect continuum spanning their languages (Helimski 2000: 23, 29). My aim in this paper is to contribute to the solid establishment of this historical scenario by adding more geographic, sociolinguistic and linguistic details. I refer to some of these details in my previously published papers, but so far they remain scattered. I therefore intend here to synthesize them into a single whole, namely a history of Northern Samoyedic people. Sections of the paper summarize insights from several disciplines, all relevant to the dialect continuum scenario: geographic evidence from the last 400 years (Section 1), sociolinguistic evidence from the last 200 years (Section 2), evidence from unpublished manuscripts based on Samoyedic linguistic data from the 18th and 19th centuries (Section 3), and evidence from the history of reindeer herding (Section 4). Section 5 integrates all these approaches and offers some methodological conclusions.

1. Insights from geographic data from the last 400 years

First of all, more structured data on the previous geographic locations of some Northern Samoyedic speakers is now available. There are two types of data: first, the purely spatial, extracted from census records (1897 and 1926) and published ethnographic works by Boris Dolgikh and his younger colleagues (1.1), and second, geographic reconstructions based on linguistic premises, namely the analysis of some isoglosses (1.2).

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1.1. The respective territories of Forest Enets and Tundra Enets

The locations of the two Enets groups over the past 400 years are refined in Khanina et al. (2018). Here I briefly summarize the findings that are relevant to the current discussion. Although the general north-eastern direction of migration among speakers of both Tundra Enets and Forest Enets is quite established in Samoyedic studies, significant new knowledge concerns the history of their shared territory. During the early 17th century they co-existed in what was quite a small area, limited to the lands immediately surrounding Mangazea (see Figure 1 based on Dolgikh, 1970).[2] However, in the 19th century, the winter territory of the Tundra Enets coincided fully with the all-year-round territory of the Forest Enets,

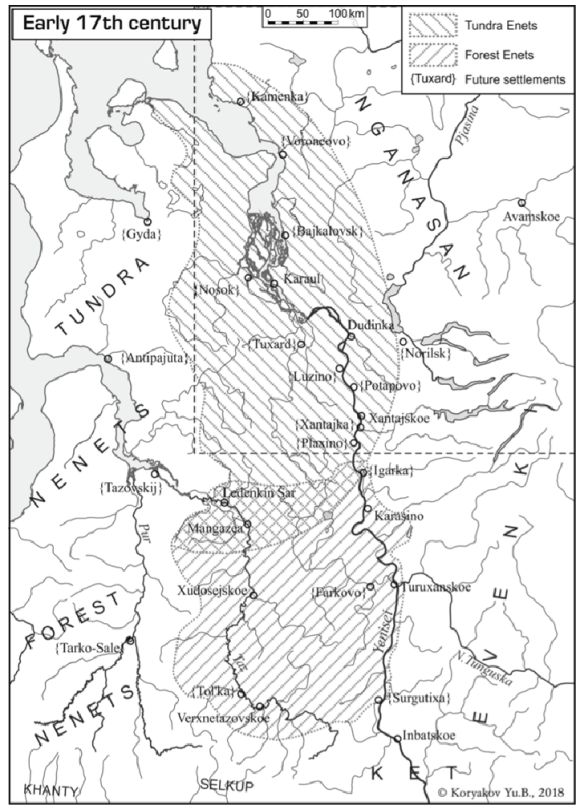

Figure 1. Forest Enets and Tundra Enets in the 17th century (Khanina et al. 2018: 113): the dotted rectangular section indicates the territory shown in Figure 2.

[2] An earlier map (Dolgikh, 1960) even shows no territorial intersection at all, with the Tundra Enets present only to the north of Mangazea.

Figure 2. Forest Enets and Tundra Enets in the 19th century (Khanina et al., 2018: 116)

who had left their earlier lands and relocated to the north, to the territory that used to belong exclusively to the Tundra Enets (see Figure 2). This situation had changed again by 1926: after at least 100 years of sharing their winter territory, the Tundra Enets withdrew to the north, and so the lands of the Forest Enets and the Tundra Enets were adjacent to each other (and not even adjacent by the the 1940s, but separated by a stretch of land).

Linguistically, there is solid evidence of joint development of the two Enets dialects/languages, separate from the other Northern Samoyedic (e.g., the simplification of all consonant clusters, the transition of word-final nasals into a glottal stop, *d-z* lexical alternation in d-initial verbal suffixes discussed in Guszev & Urmancsieva 2019, and also some unique lexical items). There is also evidence of simultaneous or posterior internal divergence (e.g., separate sound changes attested already in the earliest wordlists collected by Gerhard Friedrich Müller,[3] namely PS **ms*, **ns*, **rs* > TE d^j, FE *z, s*; PS word initial **a* > TE *e-*, FE *na-*; PS word initial **i*, not before a nasal > T *i-*, F *ji-* > $d^j i$, as well as lexical differences even in

[3] I am much indebted to Valentin Gusev who has transcribed the Enets lists from the original Müller's manuscripts

the basic lexicon such as unrelated 2nd- and 3rd-person pronouns). A contrastive comparison of modern Forest Enets and Tundra Enets, in turn, corroborates the almost identical morpho-syntax in these two dialects/languages (see Khanina & Shluinsky 2022 for more details): this recent finding was only possible following the vast improvement in the description of Enets.

Thus, the newly available geographic and linguistic details in combination imply cyclic succession in Enets land-sharing resulting in common innovations and pattern levelling on the one hand, and dwelling in (almost) disjoint territories resulting in separate linguistic development on the other. It is noteworthy that, until now, the two Enets groups have kept separate identities and do not consider themselves as belonging to one ethnic group.

This hypothesis not only elaborates the history of the two Enets groups, but also contributes to the Northern Samoyedic dialect continuum model with a specific example of interconnectedness between the spatial properties of particular groups and the propagation of change in their languages.

1.2. Further northward migration

Gusev (in prep.) suggests, based on an analysis of some isoglosses, that Yenisei Tundra Nenets used to dwell to the south-west of their current location on the left bank of the Yenisei river (also on the right bank from the end of the 19th century). Indeed, this language shares some common features with Forest Nenets, but not with other dialects of Tundra Nenets, and especially not with Yamal Tundra Nenets. These features include the absence of consonant voicing after a nasal, *-mono(n)-* variant of the Auditive suffix, with the virtual absence of the *-manon-* variant very common in Yamal Tundra Nenets, and some lexical items including a Khanty borrowing for 'soap' — *mato, matok* in Yenisei Tundra Nenets and *matäeˀk* in Forest Nenets (Lehtisalo, 1956: 265b), for example. This evidence implies that there were intense contacts between speakers of Yenisei Tundra Nenets and speakers of Forest Nenets, which was impossible on the shores of the Yenisei.[4] Other features of Yenisei Tundra Nenets are shared with Tundra Nenets, Forest Enets and Tundra Enets. This further refines its previous whereabouts to the very centre of the Northern Samoyedic groups, cf. Figure 3. Note that Dolgikh (1970: 202), based on the 1897 census, also documents a migration of some Taz people to the Lower Yenisei area.[5]

One could also hypothesize similar north-east migration in the case of the extinct Yurak language, as recorded by Gerhard Friedrich Müller in the 18th century and rediscovered by Helimski (2000: 50–55) in the context of Samoyedic linguistics. According to

[4] This was yet suggested by Tereschenko (1956: 199), though she did not provide any further details: "the easternmost varieties of Tundra Nenets have some features in common with the Pur dialect of Forest Nenets".

[5] He refers to them as Taz "Yuraks" (quotation marks used by Dolkigh) and presumes them to be Tundra Nenets of Enets origin.

Eugen Helimski, its location must have been between Tundra Nenets, Forest Nenets and the two Enets, given the specific historical changes in phonology that are shared between Yurak and each of these other Northern Samoyedic languages. More precisely, he points to "the northern area between Lower Taz and Lower Yenisei".

Yurak disappeared in the 19th century when its speakers shifted to other Northern Samoyedic languages, therefore little is known about the specific geographic location in which it was used. However, M. A. Castrén mentioned in his diary from 1847 a Nenets[6] family from the *Lambaj* clan in Tolstyj Nos, called *beregovye juraki* by the local Russians, whose "Nenets language was very close to the Nenets spoken along the Taz river (i.e. this must be Forest Nenets — *OK*), but different from the Nenets spoken in Obdorsk" (i.e. this must be Yamal Tundra Nenets; cf. Castrén, 1999: 188). There has indeed been a group of Yenisei Nenets called *beregovye juraki,* which is recurrently mentioned in the censuses and in the ethnographic literature, but it has not been ascribed any particular language of its own.[7] It does not coincide with the Yenisei Tundra Nenets discussed above: first, nowadays only some Tundra Nenets clans living in the Lower Yenisei area are called *beregovye juraki* by local elders (others are called simply *juraki*), and second, only some Nenets/*juraki* living by the Yenisei river at the time of the 1898 and 1926 censuses were counted as *beregovye juraki.* Thus, in terms of language the Lambaj family M.A. Castrén mentions in his diaries spoke either a yet unknown Northern Samoyedic variety, or Yurak, or Yenisei Tundra Nenets. The latter hypothesis is the least probable because M.A. Castrén also communicated with other Nenets speakers along the Yenisei, who must have been speakers of Yenisei Tundra Nenets, and if he described the Lambaj family's linguistic variety as particular it must have been different from the other Nenets of the area.

If this family spoke an unknown Northern Samoyedic variety or Yurak, however, then — given that their language was close to Taz Nenets — there must have been another north-eastward migration from the Taz area to the Lower Yenisei. Hence, the two Enets groups (see 1.1), the Yenisei Tundra Nenets, and this Lambaj group, all migrated in the same north-eastward direction. I will return to the possible reasons for these migrations in Section 4, but I should stress here that the Mangazeja area seems very probably to have been the location of Proto-Northern Samoyedic in the background of these reconstructed movements. It is indeed the place of the most linguistic diversity in the family: all Northern Samoyedic languages, except Nganasan, were spoken here at some point.

In sum, the spatial details discussed in this section contribute to the reconstruction of, first, the former geographic distribution of the Northern Samoyedic dialect continuum and second, migrations that resulted in the current geographic distribution.

[6] And all the Nenets in Asia were called Yuraks at the time.

[7] Dolgikh (1970: 201–203) suggests that its members originally spoke Enets (he does not mention which Enets), but later switched to Nenets.

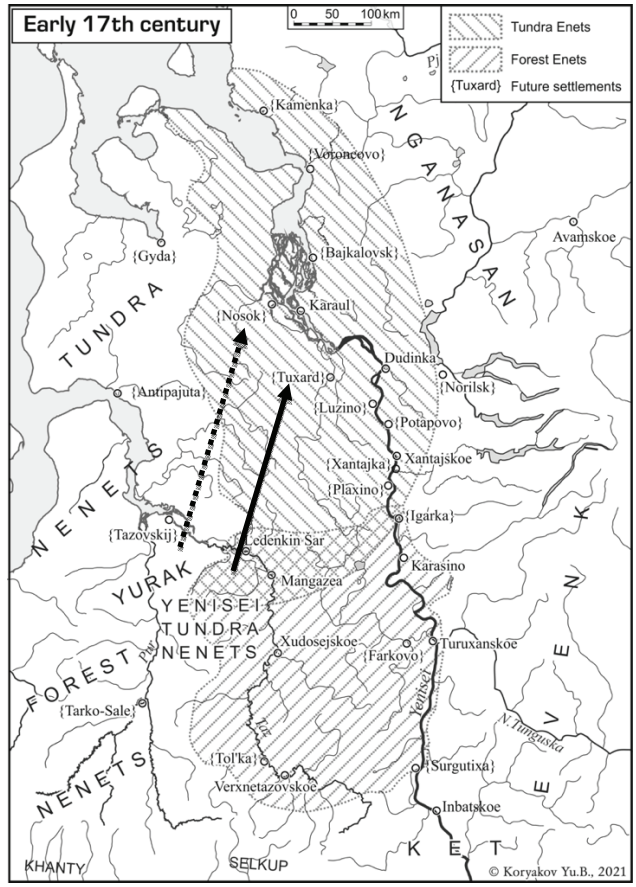

Figure 3. Northern Samoyedic languages in the 17th century (Khanina et al. 2018: 113), with added supposed locations and migrations of Yurak and Yenisei Tundra Nenets; map courtesy of Yuri Koryakov

2. Insights from sociolinguistic data from the last 200 years

The aim in this section is to refine the hypothesis concerning the Northern Samoyedic dialect continuum by adding a detailed, evidence-based sociolinguistic reconstruction. The focus is on the last 150–200 years and the Lower Yenisei area, which even though it is not the whole Northern Samoyedic territory is clearly its heart given that most Northern Samoyedic languages (all except Forest Nenets) were spoken there. The reconstruction is based on a variety of data: retrospective sociolinguistic interviews with Lower Yenisei elders conducted in 2017, narratives collected in the 1930s by Boris Dolgikh (1961,

1962a), ethnonyms in the local languages, as well as detailed 1926 census records and ethnographic field reports from the 1920s until the 1960s (see Khanina 2021 as well as Khanina & Meyerhoff 2018 for more details). In the rest of this section I summarize the sociolinguistic findings reported in Khanina (2021) that are relevant to the topic of this paper.

2.1. Mutual bilingualism

First of all, the data show that mutual bilingualism was typical whenever speakers of different Northern Samoyedic languages neighboured each other (see Khanina & Koryakov 2018 for illustrative maps). Neighbouring among nomads could be defined as meeting each other regularly. Bilingualism was not always active: cases of receptive, or passive, bilingualism were also abundant, with each party speaking their own language, hence several languages were used within one communicative event (for more cross-linguistic examples of the practice, see Rehbein et al. 2012 and Pakendorf et al. 2021). Significantly, there was no socio-economic dominance of any linguistic group over another around the Lower Yenisei, thus the bilingualism was fully balanced in terms of symbolic power. This is not to say that there was no social inequality whatsoever, but it indicates that speaking a particular language did not have any default consequence for the speaker's economic prospects. In other words, no Northern Samoyedic language was considered more prestigious than others over the whole Lower Yenisei territory.

2.2. Correlations between social categories and languages

Another crucial feature of the local linguistic ecology was the absence of a neat division into clearly identified ethnic groups, each with its own language. This is most distinctly illustrated in the deficiency of regular endonyms and exonyms for some externally defined ethnic groups around the Lower Yenisei (cf. Table 2 in Khanina 2021 for lists of particular ethnonyms), including the non-Samoyedic Dolgans, and in mismatches between ethnic and linguistic self-identification in the 1926 census. For example, only one ethnic affiliation and only one language were allowed in the census forms, and so only 77 per cent of those who named themselves Tundra Enets delineated their language as Tundra Enets and the remaining 23 per cent chose Tundra Nenets; only 84 per cent of those who named themselves Tundra Nenets delineated their language as Tundra Nenets and the remaining 16 per cent chose Forest Enets or Tundra Enets; finally, as many as 50 per cent of those indicating that they spoke Tundra Enets counted themselves as Tundra Nenets or as a member of a Forest Enets clan. All in all, this meant that there were no direct correlations between language and social category.

2.3. Shared cultural codes

All Northern Samoyeds shared a great deal of cultural knowledge and principles of interaction irrespective of the particular language codes. One could accurately describe this

situation with reference to the notion of a 'speech community', as opposed to the more common notion of 'language community' (cf. Silverstein 1972; Ball 2001: 92). The material culture was also quite similar, and at least two shifts in its pattern have been suggested among speakers of Northern Samoyedic: the Tundra Nenets culture spread to Forest Enets speakers, and the Tundra Enets culture spread to Nganasan speakers (cf. Vasiljev 1985).

2.4. Language ideologies

Ideas shared by members of a community concerning languages, their use and their role in the social world tend to be subsumed under the notion of language ideologies (Kroskrity 2000; Rumsey 1990; Silverstein 1979; Woolard 1998). It seems that the role of language ideologies in shaping linguistic structures is underestimated in the field of historical linguistics (although see Miceli 2015; Irvine & Gal 2000; Rumsey 1990; Silverstein 1979; Rodríguez-Ordóñez 2019). Examples of ideologically grounded historic processes include a cross-linguistically recurrent pattern of morphosyntactic convergence unaccompanied by any lexical convergence (cf., Thomason 2008; Aikhenvald 2002; Epps 2018, among others), lexical replacements accompanying cultural taboos (e.g., Simons 1982; Miceli 2015), and the deliberate propagation of innovations aimed at building a different social identity from that of one's neighbours (e.g., François 2011). It is precisely the language reification involved in the last of these processes that is relevant in the context of Northern Samoyedic.

However, here language reification works in the opposite direction. The fuzziness of social units larger than exogamous clans, which ultimately represented groups of not-so-distant relatives, meant that the ideological drive for social differentiation, which could push linguistic differentiation in a consistent manner, was rather weak. It is therefore possible to identify quite a number of innovations that spread among Northern Samoyedic languages regardless not only language but also branch borders (given that Nenets, Enets, and Nganasan are the three basic branches). For example, PS intervocalic **m* changed to *-w-* (> *-b-* > *-∅-*) in Tundra Nenets, Forest Enets and Tundra Enets, but remained *-m-* in Forest Nenets and Nganasan; PS Past **-så* developed into Past Interrogative in Tundra Nenets, Forest Nenets and Forest Enets but not in Tundra Enets and Nganasan, which use PS **-på* for Past Interrogative; cliticized forms of personal pronouns use a short stem in Forest Nenets, Tundra Enets and Nganasan, but a long, presumably innovated stem in Tundra Nenets and Forest Enets, TE *mo-lʲio-no*, Ng *mɨ-lʲia-nə*, but TN *mə́ˀ-ŕi-nˀ*, FE *modʲi-ru-no* 'only me (I-only-1sg)' (Gusev & Khanina 2020, 2022, Khanina & Gusev 2021, to appear). Thus, adding Northern Samoyedic language ideologies to the picture could help to substantiate the social and historic mechanisms that facilitated such wave-like spread of innovation and, in turn, instantiated the dialect continuum model.

It is clear from the retrospective sociolinguistic interviews that parents tended to value neighbourhood above kinship when they chose a language to use with their children, at least in the first half of the 20th century. For example, if the majority around them

used a language other than their patrilect(s), they could easily use this majority language with their own children. It was uncommon for parents to use several languages with their children: they might use several languages between themselves and outside of the family, but usually one language was singled out for child-directed speech within the family. The most evident examples of this come from Forest Enets- and Tundra Enets-speaking parents near the Kheta river (i.e. the so-called 'Tukhard tundra') who chose Tundra Nenets, as well as Tundra Enets-speaking parents in Ust'-Avam who chose Nganasan (see Khanina et al. 2018 and Amelina 2020 for more details). The value ascribed to the neighbourhood implies that the linguistic indexing of identity relied more on local social networks than on ancestry (referred to, in turn, by the notion of patrilect).

Finally, it would be useful to classify Lower Yenisei identities in terms of the categorical vs. the relational. Categorical identities ascribe permanent affiliation, whereas relational identities refer to one's position in a concrete web of interpersonal relations (this distinction, as applied in studies of small-scale multilingualism, was actualized by Di Carlo and Good 2014, and developed by Lüpke 2016 and Di Carlo et al. 2019). The basic social identities in Lower Yenisei were clearly categorical, based on exogamous patrilineal clans: there was no ambiguity as to clan membership[8] and the attribution could not change within one's lifetime.[9] Local linguistic identities, in turn, emerge from the data as relational rather than categorical: individual choice of a language from a multilingual repertoire was a social claim in every communicative situation. Speakers making such a claim showed allegiance to a social network that, crucially, was not exclusive and could change within a lifetime.

In the context of historical linguistics, relational identities based on localized social networks comprise an ideal mechanism for spreading innovations over language borders, particularly in the case of nomadic people. Unlike in the more familiar cases of language contact among sedentary people (see, e.g., Thomason & Kaufman 1988), the imperfect acquisition and transfer of features did not require any extraordinary events, but were the everyday reality of individuals speaking Northern Samoyedic languages in the past.

2.5. Diachronic changes

The last sociolinguistic circumstance of the Lower Yenisei to be mentioned is the extensive bidirectional language shifts among Northern Samoyedic clans and their elements. These shifts have been documented (Dolgikh 1970; see also Gusev 2020), but to the best of my knowledge their significance in historical linguistics has not yet been discussed. Not only could clans shift their 'main' language over time, they could also disappear (Dolgikh 1970). So this linguistic instability also contributed to the fuzziness of 'ethnic' groups and

[8] Exceptions refer only to adopted children, see (Dolgikh 1962b).

[9] It is less clear whether there were any social identities of a higher order, i.e. of ethnic groups, and if they existed what the difference from linguistic identities was in practice.

the lack of direct correspondence between social groups and languages mentioned above. Moreover, it was another sociolinguistic mechanism operating along the discussed dialect continuum: not only could individuals choose to raise their children in a language other than their patrilect, their choice could spread to the whole of their basic social group (=clan). If relational identities based on localized social networks explain the operation of the dialect continuum on the individual level, diachronic changes in the linguistic attribution of clans could specify the process on the wider societal level.

Finally, these diachronic changes also serve to explain the disruption that occurred along the dialect continuum: Northern Samoyedic languages attested today differ from each other considerably, and there is no mutual intelligibility. Some (or many?) intermediate language varieties that could connect modern languages might have disappeared during the course of this diachronic development involving such language shifts. A well-known Yurak example (see Helimski 2000: 50–55) illustrates the point well. Dolgikh's (1960) map of Siberian clans, which features some ethnonyms that represent a real puzzle in the present day, is another example. Scholars have no idea which language was spoken by the Tidiris or the Pjasida Samoyeds, the Northern Samoyedic groups that later dissolved into what nowadays is called Tundra Enets and Nganasans (probably also Dolgans). They could well have spoken Northern Samoyedic languages that were intermediate to those currently attested.

2.6. A summary of the sociolinguistic reconstruction

I should remind the reader that the reconstruction of Lower Yenisei sociolinguistic ecology is built on quite recent data (from the late 19th century until the middle of the 20th century), whereas the dialect continuum model is assumed to have existed for much longer, at least since the first millennium AD. Is it possible to extend the sociolinguistic description beyond the period for which there is more or less direct evidence? The answer seems to be yes, and it comes from similar studies across the world.

In recent years, several linguists have directed their attention to social mechanisms operating in modern indigenous multilingual communities in order to explain the evolution of their languages. Focusing on the languages of Australia and Papua New Guinea, for example, Evans (2017, 2018) suggests that the prehistoric linguistic past of small-scale indigenous communities could be uncovered via sociolinguistic studies of their modern communities and linguistic studies of their languages. Case studies of Oceania (Francois 2012) and Australia (Rumsey 2018) illustrate the point with specific examples similar to the Northern Samoyedic case. Evidently, our supposition that the sociolinguistic situation of the remote past was not very different from what could be observed recently remains a hypothesis. Nevertheless, if it does not contradict findings from historical-comparative linguistics, or even explains them, one could plausibly take it as a working instrument before deeper knowledge about the past becomes available.

3. Insights from unpublished manuscripts reflecting languages of the 18th and 19th centuries

Unpublished manuscripts by Gerherd Friedrich Müller, who collected some Samoyedic data in the 18th century, and M. A. Castrén, who did the same in the 19th century (cf. Khanina, forthcoming) for Enets, provide additional insights into the purely linguistic side of the dialect continuum. Indeed, researchers in the past were able to collect data when this continuum was still sociolinguistically real, as shown above in the previous section. Would there be any consistent linguistic footprint of such data compared to the data from the second half of the 20th century? It is known that the latter data were collected when the continuum was already broken, and the remaining Northern Samoyedic languages showed clear linguistic detachment from each other.

In light of preliminary observations I could make on these manuscripts, some linguistic peculiarities are indeed noticeable. First and foremost, there was more variation in languages that have continued to be transmitted until recently, both internal (= within one and the same speaker) and external (= at different geographic locations). For example, M. A. Castrén's Tundra Enets manuscripts exemplified not only all phonetic and phonological variation that is currently attested in Tundra Enets (Khanina 2018), but also quite many cases of variation that had disappeared by the middle of the 20th century: *r ~ l ~ lr* (=*ɬ*) in place of modern word-internal *r* (< PS **r, *l); dj ~ j* in place of modern *dʲ* (< PS **j);* *k ~ h* in place of modern word-initial *k* (< PS **k*), and so on.

Second, the lexical difference between Forest Enets and Tundra Enets in Müller's manuscripts is more significant than in modern word lists (e.g., Koryakov 2018). It is noteworthy that this concerns not only the phonetic properties of words, but also lexical incongruencies. It is, of course, possible to attribute the contrast to the mere imperfection of the word-list collection methodology: poor translation by an intermediary between the linguist and a native speaker, the accidental choice of a word among its synonyms, and so on. However, given the sociolinguistic history of interactions between the two Enets groups reviewed in 1.1. above, these data could also testify that the two Enets have undergone not only morphosyntactic but also lexical convergence since the 18th century. In particular, there were clearly a number of lexical replacements, such as replacing non-cognate with cognate lexemes, original or borrowed from the other Enets with a due phoneme recalculation. It is yet to be determined how symmetric this replacement was, and if it was asymmetric, which Enets language was the source of lexical influence over the other.

Finally, M. A. Castrén's manuscripts attribute some features that are currently characteristic of Forest Enets and not of Tundra Enets, specifically to Tundra Enets. This includes the shape of particular lexemes (e.g., *nŏhilro* 'dirt', cf. *noxilo* in modern FE, but *nexi?*, with *nexiro?* as a plural form in modern TE; *se<u>ni</u>kua-r* [play(ipfv)-1SG.S], 'I am playing', but *se<u>no</u>ko-da-r* [play(ipfv)-FUT-1SG.S] 'I will play', cf. modern FE *senokus-*, TE *sen'ikus-*;

to-dda [hair-NOM.SG.3SG] 'his hair', cf. modern FE *to-da*, without anything similar in TE). It also includes some morphemes, such as an anterior participle with *-j*.

In sum, the examples discussed in this section provide yet further glimpses into the specific historical processes that realized the Northern Samoyedic dialect continuum.

4. Insights from the history of reindeer herding

There were two substantial northbound waves of Northern Samoyedic migration, probably complemented with the never-ending gradual movement in the same direction. The first one was the Northern Samoyedic split from Proto-Samoyedic around 2,000 years ago (Helimski 2000, Hajdu 1975; Korhonen & Kulonen 1991). The second happened around the 18th century when speakers of Forest Enets, Yurak, Yenisei Tundra Nenets, and Tundra Enets to some extent, started to dwell to the north of their previous locations (and somewhat more to the east given the particular geography of the area immediately north of the Mangazeja area), as discussed in Section 1.

The history of reindeer herding in Western Siberia offers historical linguistics possible reasons for the northbound movements: there were two major breakthroughs in reindeer herding, and their timing coincides exactly with these migrations. First, transport reindeer herding emerged in Western Siberia some 2,000 years ago, probably in the Sayan Mountain region: see Nieminen (2018: 14–19) for a literature overview, and also archaeological studies (Fedorova 1998, 2002 & 2019; Fedorova & Gusev 2019) that suggest similar timing, but a more northern location of domestication. Being able to cover large distances with reindeer sledges, the hunters soon to be known as Northern Samoyeds presumably split from their mates in the south and headed north. Second, extensive large-scale reindeer herding emerged in the north of Western Siberia in the 17th and 18th centuries (Krupnik 1993; Golovnev & Osherenko 1999). This evolution from a form of transport to large-scale herding meant a change in reindeer numbers from several dozens to at least several hundred per family. As Stépanoff (2017) suggests, from this moment on the needs of these bigger herds were prioritized over the needs of their owners. The bigger herds required more open space, particularly tundra lands in summer, therefore people with large herds had to relocate gradually to the more northern areas.

It has been hypothesized that both breakthroughs in reindeer herding were conditioned, or at least stimulated, by corresponding climate changes: lower temperatures could have boosted reindeer fertility and could have led to deforestation in the northern forests thus making them more suitable for reindeer (Krupnik 1993). Other possible causal factors influencing the emergence of large-scale reindeer herding in the 17thand 18th centuries include fur taxation under Russian colonizers (Golovnev 2004, Krupnik 1993, Golovnev & Osherenko 1999), as well as man-made fires that also fuelled deforestation (Smirnova et al. 2017: 92–93). The consequences of both disasters may have been less no-

ticeable in the north, however. Whatever the reasons behind the breakthroughs, they clearly caused massive northward human migration, bringing new languages to the Arctic zone and messing up the languages already present there.

It is noteworthy that some particular aspects in the recent history of the Lower Yenisei (100–150 years ago) are illustrative examples of close interrelations between subsistence modes and language ecologies in this area (see also Güldemann et al. 2020 for more examples from other parts of the world). Khanina et al. (2018) mention a language shift to Tundra Enets for a fraction of Forest Enets speakers. The following hypothesis sets out exactly how this shift was shaped by a change in subsistence patterns. Speakers of Forest Enets and Tundra Enets shared the same territories along the Yenisei river in the 1830s and the 1840s, but because the majority of the former earned their living from hunting and fishing, and most of the latter practised large-scale reindeer herding since the 18th century (see above), they managed to keep their social identities separate and to maintain their own respective languages (cf. Section 1). When several families of Forest Enets speakers[10] expanded their reindeer herds and thus switched from hunting and fishing to large-scale herding, however, they had to employ the same itineraries that the Tundra Enets herders had already used. Indeed, the longer and more rigid itineraries necessitated by the expanded herds, with summers in the open tundra, left them no other options in the area. Presumably, the Tundra Enets had nothing against this, because for them it meant an increase in the number of suitable marriage partners, much appreciated among their small group.[11] As a result, a couple of generations later these Forest Enets abandoned their language in favour of Tundra Enets: at the time of the 1926 census, 80 years after the registered increase in reindeer herds among this fraction of Forest Enets speakers, nobody in this group spoke the language. This is an example of how a switch in the type of reindeer herding from a form of transport to large-scale activity resulted in a northern turn in migration routes, thereby causing a shift to the language of the majority in this northern area.

However, not all groups known to have moved to the north practised large-scale reindeer herding. For example, the Forest Enets lived mainly from fishing and hunting in the 19th century, with only transport reindeer herding. Hence, their movement north-eastwards cannot be directly attributed to the emergence of a new type of reindeer herding. It may be that they relocated to the north in an attempt to evade fur taxation, as mentioned above, as well as the new epidemics brought by the colonizers. It is also possible that the main reason was their armed clashes with the newly arrived Selkups, who had been displaced by the Russians from their more southern territory. Piezonka et al. (2020) describe this Selkup relocation in illuminating detail, written from the Selkup perspective, in what is still a unique ethnoarchaeological account of any Samoyedic northward migration.

[10] These were some families from the Moggadi and Baj clans.

[11] At least in the middle of the 20th century all descendants from this group of Forest Enets were intermarried with Tundra Enets.

5. Conclusion: a scenario integrating all types of data

I have attempted in this paper to shed light on the history of Northern Samoyedic languages and their speakers by combining several types of evidence, originating in previous publications (Sections 1–2), in analyses of as-yet unpublished manuscripts (Section 3), and in a critical overview of non-linguistic literature (Section 4). I depict the history here as a succession of northbound migrations from the more southern location of Proto-Samoyedic, originally realized by three social and/or geographic groups from which the three known subgroups, Nganasan, Enets and Nenets, emerged. Crucially, the period of unity, if it existed at all, was followed by a weakening of these social affiliations, which resulted in what is now called the Northern Samoyedic dialect continuum.[12] Moreover, various dramatic political events during the 20th century distorted the local linguistic ecology to the extent that it could give the external observer a false impression of separate language communities and reified languages from a European textbook. In the rest of this section, I summarize the analytical steps I have taken to deconstruct this impression and to build a detailed picture of the dialect continuum suggested but unfortunately never fully elaborated by Eugen Helimski.

The sociolinguistic data discussed in Section 2 accounted for specific sociolinguistic processes that instantiated the dialect continuum. These included bilingualism in neighbouring languages (active and passive/recipient); language ideologies foregrounding relational identities based on geographic proximity and not on ancestry; the spread of innovations that disregard any possible foregoing divergence; and alternate phases of more and less intense interaction with various neighbours.

The unpublished manuscripts referred to in Section 3 reveal that there was more variation in Northern Samoyedic languages when they were actively used in the absence of any lingua franca. Against this historical background, their modern counterparts turn out to be merely accidental fragments of the former rich and rather inter-related systems. In addition, their strict reification seems to be a recent phenomenon, resulting partly from their obsolescence and partly induced by external ethnographers and linguists, whose implicit language ideologies were very different from what was typical of Northern Samoyedic in the past (cf. Gal, in press).

According to the interdisciplinary data analysed in Section 4, many rearrangements of the geographic locations of Northern Samoyedic speakers, as well of smaller groups (some of which I refer to in Section 1) could be tentatively attributed to changes in subsistence patterns and the influx of other social groups in the area. The changes in subsistence patterns, in turn, were also conditioned by a number of ecological and social factors.

[12] Note that this suggested scenario for the whole of the Northern Samoyedic, repeats minutely the scenario for the Enets groups elaborated in Section 1.

Ecological and social settings are quite fragile and ever-changing in this northern region, hence one could assume that the described fluctuations in subsistence and the migrations represent only a portion of what has really been going on during the last 2,000 years.

Last but not least, a word of caution is needed concerning the inevitable circularity of historical reconstructions. There are several types of evidence, and for each type there are several interpretations. If one chooses an interpretation of one type of evidence that aligns with one's chosen interpretation of some other type of evidence, the result is a picture in which all the interpretations converge more strongly than the raw data do. While it is possible that they converge so nicely because that was the reality of the past, it is also possible that the unity of the reconstruction is somewhat artificial and owes more to the way of reasoning. I see no other way out of this cyclicity than to keep its potential in mind and to collect as much raw data as possible, checking each and every piece of new evidence for possible controversy. All being well, this will make the proposed research trajectory look more like a spiral than a circle.

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