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ИМЕННОЕ ВРЕМЯ И СЕМАНТИЧЕСКИ СХОЖИЕ
ПОКАЗАТЕЛИ В ЯЗЫКАХ СИБИРИ КАК АРЕАЛЬНОЕ ЯВЛЕНИЕ

Nominal Tense And Semantically Similar Markers
In Siberia As An Areal Feature

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Abstract

Nominal tense is found in plenty of languages all around the world. The presumable occurrence of nominal tense in Siberia has been discussed in the past ten years, however its analysis in crosslinguistic perspective has not been performed hitherto. The paper presents a multidisciplinary study of nominal tense-like categories in Siberia. The first part of the current paper is dedicated to nominal tense's distribution worldwide supported by statistical evidence. The macro-analysis based on the results of Fisher's exact test shows that Siberia has a significant influence on the distribution of nominal tense worldwide, as well as South America and North America. The second part of the study proposes a possible explanation of how particular cases of nominal tense, namely destinative and nominal tense derivations with tense-like meaning, established in several languages of Siberia due to language contact. In case of destinative three hypotheses with the following discussion are proposed, namely 'from Samoyedic to Tungusic', 'from Tungusic to Samoyedic' and 'due to the third language's influence'; however no hypotheses can fully explain the spread of destinative. The case of nominal tense derivations is elaborated based on the Ancient Siberian substrate hypothesis (Gusev, 2021) adding new examples of derivations in question to Gusev's previous research and coming up with alternative scenarios.

1. Introduction

This paper presents research based on the concept of nominal tense. Nominal tense is a grammatical category that shows how nominals are distributed on a timeline (definition is based on Nordlinger and Sadler, 2004). The categories which are usually named as nominal tense modify the temporal component of a nominal they attach to. Usually they place the period when an entity exists either before or after the point of the event (Reichenbach, 1947: 287–298), specifying whether an entity existed and became dead before the event time, is present at the point of the event or will appear after that point. At the same time, the event time does not undergo the modification itself. Example 1 from Maco (Saliban, South America) shows a noun with a marker *-mina-* which means 'former, deceased' and could be imagined as nominal past tense, i. e. 'X existed in the past but not at the time of the event.

- | | | |
|---|-------------------------------|----------------|
| (1) <i>d-aʔdi-mina-ma</i> | <i>ø-mik^w-in-a</i> | <i>cachero</i> |
| 1PL-grandfather-NPST-TOP | 3SG.M-be.called-PST-TAME | C. |
| 'Our late grandfather was called Cachero'. (Rosés Labrada, 2015: 272) | | |

Not only the existential semantic component can be modified with nominal tense. Two other properties of nominals can also undergo temporal changes due to the influence of

nominal tense markers: possession and status. Just as an object's period of existence is restricted with its birth or creation and death or destruction, the ownership of an entity, or its status and function are not eternal. Thereby, nominal tense affixes can also express the meaning 'X that used to be owned by Y / X that is destined to Y' as in Example 2 from Kalaallisut (Eskimo-Aleut, North America) and 'X that used to be Y / X that is destined to become Y', see. Example 3 from Chukchi (Chukotka-Kamchatkan, Siberia).

- (2) *tunissuti-ssa-q* *niviarsia-mut* *pisiara-ara*
 gift-NFUT-ABS girl-ALL buy-1SG.SUBJ/3SG.OBJ.IND
 'I bought a gift for a girl'. (Fortescue 1984: 213; also Examples 42, 86)

- (3) *ŋewʔen-ləqəl*
 wife-NFUT
 'bride, future wife'. (Skorik, 1961: 315; also Example 68)

Different languages that have nominal tense in their nominal paradigm give the possibility to modify nominals' temporal characteristics in at least one of aforementioned ways. In some languages the same affix can modify nominals differently depending on a stem it attaches to, as in Mapudungun (Araucanian, South America, see. Examples 4–6).

- (4) *ñuke-yem*
 mother-NPST
 'late mother'. (Smeets, 2008: 110)

- (5) *longko-yem*
 leader-NPST
 'former leader'. (Smeets, 2008: 110)

- (6) *fey-tüfá* *ñi* *küðaw-yem*
 that-this POSS.1SG work-NPST
 'This is my former job'. (Smeets, 2008: 110)

The markers can as well occur with different sets of stems and, respectively, form different meanings within these three directions. For example, the enclitic =*cud* 'dead,

deceased' in Hup (Naduhup, South America) can only be used with nominals that denote people or animals (e. g. 7), whilst the suffix *-iwaš* in Ineseño (Chumashan, North America) can as well be used with inanimate objects to denote a defunct entity that is no more in use (e. g. 8). All in all, there are a variety of possible meanings that can emerge with temporal modification of nominals in different languages.

- (7) *ʔin=pāç=wəd=cud* *peʔ-ní-h*
 POSS.1PL=father's.brother=RESP=NPST sick-INFR-DECL
 'Our late uncle was sick'. (Epps, 2008: 353)

- (8) *ma-k-ʔepsuʔ-iwaš*
 ART-POSS.1SG-basket.hat-NPST
 'my worn-out basket-hat'. (Applegate, 1973: 226)

Besides tense, other traditionally verbal grammatical properties such as Aspect, Mood or Evidentiality can also have semantically relative categories that modify the semantics of nominals. Moreover, some researchers even claim that what is called nominal tense is in fact a more nominal aspect or modality-like category rather than tense (Tonhauser, 2006), however this point of view is argued in (Nikolaeva, 2015) based on data from Tundra Nenets language. In this paper I am going to focus only on nominal tense-like categories, without paying attention to other presumable cases of nominal (T)AME.

In the most traditional way which it was stated by Nordlinger and Sadler (2004) to name a feature a nominal tense the following criteria are needed:

1. Modifies only NP-semantics without modifying VP
2. Not (only) for nouns in Predicative Position
3. Applicable for different noun classes
4. More inflectional than derivational
5. Not a transcategorial clitic

However, as it was also mentioned in (Nordlinger & Sadler, 2004: 2) under this criteria only the most prototypical cases of nominal tense come. In this research I would like to focus on possibility of languages to express the temporal component of nominals' semantics grammatically and not lexically, even if this possibility can be realized only for a specific noun class (for example, family members or animate nouns) and behavior of such markers seems to be more derivational-like. I include clitics as well, if they fulfill the

semantics requirements. In other words, I would extend the scope of my research from prototypical nominal tense to a wider set of grammatical categories which I am going to designate ‘nominal tense-like categories’ when a distinction has to be made, or, generally, ‘nominal tense’ further in this paper. I am not mentioning here propositional nominal tense (including tense clitic, which are combined into one prosodic word with nominals, such as *we’ll* in English), nominal predicates in verbless clauses, tense markers on verbs that undergo nominalization afterwards, and separate morphological words, bearing the same semantics.

While there are plenty of publications dedicated to nominal tense, it remains a relatively undescribed grammatical category. For the first time it was noticed in Kwakiutl (Wakashan, North America) by Boas, Yampolsky and Harris (1947, p. 242). Typological works were published more recently, for example, later review of the main features of nominal tense such as its compatibility or fusion with other grammatical categories with examples from different languages is presented in (Lehmann & Moravcsik, 2000). A big typological research based on 12 languages from three continents was introduced by Nordlinger and Sadler (2004). The authors describe two possibilities of nouns to possess TAM (tense, aspect or mood) markers: independent TAM, when the tense marker modifies nominal’s semantics itself, and propositional TAM, when the marker has influence on semantics of the whole proposition while being located on a nominal. It is the former case that is relevant for the current study. For independent TAM Nordlinger and Sadler propose already mentioned criteria that define core cases of nominal tense for its future analysis in typological perspective.

In addition to typological research, description of nominal tense can be found in grammars and articles dedicated to particular languages, most commonly in South America (e. g. Da Silva Tavares, 2005 in Wayana, Cariban; Epps, 2008 in Hup, Naduhup; Rosés Labrada, 2015 in Maco, Saliban; etc.). Several articles focus on nominal tense in particular languages, such as Jacqueline Lecarme’s studies on Somali language (Lecarme, 1996; 2012) and Judith Tonhauser’s dissertation about temporal semantics of nominals in Guarani (Tonhauser, 2006). Both present not only the evidence from particular languages, but also a comprehensive theoretical overview on nominal TAM and its descriptive peculiarities.

As the main goal of my research is to focus on nominal tense-like categories in Siberia, a brief overview of former investigations of this field has to be mentioned. The research about nominal TAM in Siberia was mostly focused on a specific feature which is found in two language families in Siberia (Tungusic and Uralic) — destinate (also predestinate declension in Samoyedic, designative case in Tungusic). In early grammars of

Samoyedic languages such as Tereshchenko (1947) for Tundra Nenets predestinative was usually described as a specific declension type with predestination meaning. However, half a century later Nikolaeva (2015) proposed that predestinative declension can be described in terms of nominal tense, namely, as future possession. In case of Tungusic languages destinative can be reanalysed in a similar fashion: here destinative fills the case slot in a word form and, respectively, it was previously described as a usual case with some morphological restrictions (Tsintsius, 1947 for Even; Nikolaeva & Tolskaya, 2001 for Udihe; Ozolinja, 2013 for Oroch; Boldyrev & Avrorin, 2001 for Oroch; Avrorin, 1959 for Nanai). However later research in Even showed that Tungusic destinative, as well as Samoyedic, also evinces nominal tense-like behavior (Baklanov, 2021). Similar behavior and semantics of destinative develops the idea of contact ancestry of this feature, however it is still unknown which group of languages was the source of destinative, and which one acquired this feature, as well as the circumstances of acquisition remain undescribed. From the Samoyedic perspective, Salminen (2014) established the historical relatedness between predestinative in North-Samoyedic languages and the Finnish translative case. Later, Ylikoski (2017) pinpointed the same ancestry also for lative case in Mari. I am going to discuss the previous research on destinative in more detail in Chapter 3.2.

Another case to discuss is a plenty of derivations with nominal tense-like meaning which are different both semantically and morphologically. These derivations occur in various non-related languages all around Siberia. Such examples were separately described in grammars (e. g. Nikolaeva & Tolskaya, 2001 for Udihe; Bulatova & Grenoble, 1999 for Evenki; Maslova, 2003 for Southern Yukaghir; Wagner-Nagy, 2018 for Nganasan), however until recently no attention was paid to such a phenomenon. Gusev (2021) notices these derivations and proposes them among the evidence in support of the ancient Siberian substrate hypothesis. I am also going to elaborate on his hypothesis in Chapter 3.3. Finally, as I propose that nominal tense-like categories could have developed in Siberia due to the language contacts, some areal typology concepts have to be clarified. Linguistic area is the following phenomenon: a number of geographically adjacent and not closely related languages share common structural features that did not evolve from the same proto-language but developed due to language contact while surrounding languages do not possess these features (Haspelmath, 2008; discussion on the definition see in Campbell, 2006). Such shared features are called areal features and are the key point of my interest in this research. Lately there have been developed a plenty of computational methods which are used along with traditional methods of linguistic analysis in areal framework (Towner et al., 2012; Michael et

al., 2014; Ranacher et al., 2021). In the case of Siberia the information about language contacts is based on works of Helimski (2000), Janhunen (2013) and Vasilevič (1948) about migrations of various Siberian peoples. The genetic evidence of Tungusic migrations and place of origin is also discussed in (Liu et al., 2020) and (Wang & Robbeets, 2020).

The paper consists of two parts. The aim of the first part is to find out if languages with nominal tense are distributed geographically and if so, which macro-areas tend to contain languages with nominal tense and which do not. My hypothesis is that there are some macro-areas that are more likely to have languages with nominal tense, as well as some others that do not have it. To check this hypothesis I use statistical methods such as Chi-square test and Fisher's exact test. The statistical evidence is provided in Chapter 2.

The aim of the second part is to take a closer look at languages of Siberia. Two nominal tense-like categories are found in Siberia. The first one is destinative case in Tungusic (e. g. 9 from Even, Tungusic) and predestinative declension in North Samoyedic (e. g. 10 from Tundra Nenets, Uralic) that form structurally different but semantically similar categories with the meaning of future possession.

- (9) *bi aŋa-ni-wu anton urbak-ka-n*
 I sew-PST-1SG A. shirt-DST-POSS.3SG
 'I sewed a shirt for Anton'. (fieldwork¹, 2021)

- (10) *kniga-də-mt° m'inja-d°m*
 book-PRED-ACC.2SG give-1SG
 'I gave you a book'. (Nikolaeva, 2014: 74)

Linguists noticed semantic similarity between these two categories and proposed that they may have the same origin, however there have been yet no description of how these categories are related to each other. In this research I work with three main hypotheses on this question: 1) Tungusic languages received destinative due to the persistent contact with Samoyedic languages (or a particular language); 2) Samoyedic languages received predestinative due to the persistent contact with Tungusic languages (or a particular language); 3) Both Tungusic and Samoyedic languages received these categories from a

¹ Here and further the fieldwork examples were collected during the field trip to the villages Esso and Anavgaj in Bystrinsky District of Kamchatsky Krai in June 2021. The field trip was sponsored by the grant "Otkryvaem Rossiju zanovo" (<http://openrussia.rsv.ru/>).

third, recently unidentified language, i. e. particular case of the Ancient Siberian substrate hypothesis. All these three hypotheses are checked with use of previous studies about language contacts and migrations in Siberia. I compare and examine these hypotheses in Chapter 3.1.

Another Siberian tense-like category is a number of nominal derivations with temporal meaning (either ‘broken, deceased, former X’ or ‘future X’) in different non-related languages such as Udihe, Evenki, Southern Yukaghir, Nganasan, etc. Example 11 illustrates a word form with such a marker in Udihe, Tungusic.

- (11) *ei zugdi-we iwana-ŋa: wo:-m*
 thishouse-ACC I.-NPST make.PST-3SG
 ‘This house was made by deceased Ivan’ . (Nikolaeva & Tolskaya, 2001: 154;
 also Example 63)

Unlike destinative, it is almost impossible to describe the spread of this feature in terms of particular language contacts, so the only possible hypothesis here besides coincidence is that these derivations developed from an unknown Paleosiberian substrate language. The possibility of such a scenario I discuss in Chapter 3.2. Finally, I summarize the information and make assumptions for the future research in Conclusion. The necessary data I based my research on is provided in Appendices.

2. Nominal Tense cross-linguistically

2.1. Methods and sample

Despite the fact that languages with nominal tense and similar categories are met almost in all linguistic macro-areas, it is distributed unevenly. I have found no languages with it only in Papunesia, also Africa has no languages in the typological sample I used, however Lecarme (1996) described nominal tense in Somali. Moreover, its structure varies in different macro-areas. These facts give rise to an assumption that at least in some macro-areas nominal tense could have developed due to the contacts between languages from language families on adjacent territories. In this chapter I use statistical methods to check this assumption.

A number of brand-new statistical methods were invented recently in order to either determine if a language feature has an areal bias or postulate a new language area. The former type is presented by the Family Bias Method, which is based on tracing the changes in diachronic development and finding possible areal effects as irregularities with use of statistical tests or a Bayesian mixture model (Bickel, 2015). The latter type of methods includes comparison of areal influence and genealogical affinity effect on a limited territory within up to 175 km (Towner et al., 2012), comparison of languages around a previously determined “core” language regarding if the languages in question had contacts with the “core” language (Michael et al., 2014), and the recentmost method which compares languages’ affinity and location and postulates possible language areas with unlimited borders and undefined center (Ranacher et al., 2021). However, besides advanced methods traditional statistical tests can be used as well: it can be either logistic regression which is determined to predict if location of a particular language increases the likelihood of occurrence on nominal-tense like categories in it, or Fisher’s exact test, which can show if the distribution of languages with nominal tense is significantly biased towards a language area. Since I am not familiar with most of the statistical methods I described above, I use Fisher’s exact test as the most convenient for me and the easiest to interpret.

For the macro-areal statistical analysis I used a typological sample of 109 languages which consists of twenty languages per five macro-areas (South America, North America, Australia, Africa and Papunesia) and nine languages in Siberia, on which I primarily focused in this research. Each language was either a representative of the whole family (i. e. one language per family, the family affiliation was based on Glottolog structure) or an isolate. The original sample was provided by the Laboratory for Arctic Social Sciences and Humanities and contains 120 languages from six macro-areas, however I adapted it for my

research. Instead of the sixth macro-area Eurasia, presented in the original sample, I used Siberia due to the following reasons. First of all, the aim of my research is to check whether the occurrence of nominal tense in Siberia has an influence on its distribution worldwide, so it lays basically in the focus of my research. Moreover, I consider that Eurasia is a way wider territory in comparison to other macro-areas, whilst the size of Siberia can be compared to such macro-areas as South America. Finally, it seems unlikely that languages from different parts of Eurasia had historical contacts with each other enough to postulate it as a single macro-area. On the other hand, there are only nine language families present in Siberia and no more than nine languages from this area can be taken into consideration in my analysis, whilst from other macro-areas I took twenty languages per each. However, the methods I use (namely, Fisher's exact test) are able to analyze the data of samples of different sizes, that is why this sample can be used with no limitations. For this research the most well-described languages in each family were chosen.

Each language in the sample is represented with a grammar. If there is more than one language in a family with a complete description, the recentmost grammar was chosen. For each macro-area the samples were chosen independently by different researchers that worked on macro-areas they were least familiar with². The sample for Siberia was made by me, however I based my choice on the sample for Eurasia and with use of the same principles mentioned above. The sample is provided in Appendices.

I analyzed all the grammars with the goal to find grammatical categories with semantics that I described in Chapter 1 regardless of their morphological status. For example, I equally counted nominal derivations and case-like categories as nominal tense. After the analysis of grammars of these 109 languages I received the results that are depicted in Table 1.

Table 1: Real values for all areas.

	<i>South America</i>	<i>North America</i>	<i>Australia</i>	<i>Siberia</i>	<i>Africa</i>	<i>Papunesia</i>
No NT	9	12	19	4	20	20

² The group of researchers that made the sample is following: Africa — Lesha Vinyar; Australia — Dasha Ignatenko; Papunesia — Sasha Nogina; North America — Tanya Kazakova; South America — Løsja Baklanov; Eurasia — Elizaveta Kopylova.

NT	11	8	1	5	0	0
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To check the possibility of areal influence on the distribution of nominal tense I used statistical methods which are described as follows. First, I used the Chi-square test in order to determine whether the geographic distribution of languages that have nominal tense-like categories in their inventories is random or is driven by their location in specific macro-ares. After the Chi-square test I apply Fisher's exact test to each macro-area in order to specify which area has the strongest influence on geographical distribution if the parameter of geographical distribution is significant.

2.2. Statistics

3.1.1. Chi-square test

First of all, I used the Chi-square test to find out if nominal tense distribution is influenced by any factors. The null hypothesis (H0) expects that the distribution of nominal tense is random. Respectively, alternative hypothesis was that languages with nominal tense are clustered and its occurrence in language is not random. I used *vcd* package (Meyer et al., 2023) for R to run this test. I decided not to include Africa and Papunesia in chi-square analysis because no languages with nominal tense are found in these macro-areas, and null meanings can trigger mistakes and inaccuracies during running the Chi-square test. The table with data is provided below (Table 2).

Table 2: Presence of nominal tense (NT) for Chi-square test.

	<i>South America</i>	<i>North America</i>	<i>Australia</i>	<i>Siberia</i>
No NT	9	12	19	5
NT	11	8	1	4

As a result, $\chi^2 = 12.035$ with degree of freedom = 3 and p-value = 0.0072658. The results show that the distribution of nominal tense is not random and further investigations are needed. Also, Cramer's V (effect size) = 0.418, which means that effect size is medium and can be considered as reportable. Thereby, Chi-square test showed that the distribution of nominal tense cross-linguistically depends on their geographic location.

4.1.2. Fisher's exact test

To find out which language macro-areas have the most noticeable effect on the distribution of NT I used Fisher's exact test. As H_0 I took the proposition that areal affiliation does not have influence on distribution of nominal tense. The presence of areal influence thus becomes H_1 . For this test four tables for four macro-areas that received nonzero values were drawn (see. Tables 3–6, where NT stands for nominal tense), however two remaining macro-areas, Africa and Papunesia, were used to count expected values. The expected value of number of languages with nominal tense for South America, North America and Australia was 4.40367, while for Siberia was 1.981651, so for South America ($11 > 4.40367$), North America ($8 > 4.40367$) and Siberia ($5 > 1.981651$) I chose Alternative Greater, while for Australia ($2 < 4.40367$) I took Alternative Less. The results of p-value lower than 0.05 are trumpeted as significant.

Table 3: Fisher's test for South America (SA)

	+NT	−NT
+SA	11	9
−SA	14	75

Table 4: Fisher's test for North America (NA)

	+NT	−NT
+NA	8	12
−NA	17	72

Table 5: Fisher's test for Australia (AU)

	+NT	−NT
+AU	1	19

-AU	24	65
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Table 6: Fisher's test for Siberia (SI)

	+ <i>NT</i>	- <i>NT</i>
+SI	5	4
-SI	20	80

The results of Fisher's test showed that the most significant areal effect in the whole sample comes from South America (p-value = 0.0005266, 0.95C.I.= 2.36323, OR = 6.395778). Probability of this result to be random is significantly low, while odds ratio shows that occurrence of nominal tense is six times bigger than its absence. North America also showed that it has a significant influence on the distribution of nominal tense, however the values are considerably less extreme in comparison with South America (p-value = 0.04759, 0.95C.I.= 1.013254, OR = 2.791808). Both p-value and confidence interval are close to the borderline meanings, however still significant. Surprisingly, Australia as well received significant results in p-value, however it does not fulfill the criteria for 95 percent confidence interval and odds ratio (p-value = 0.02596, 0.95C.I.= 0.000000, OR = 0.1442179), so the data does not prove that nominal tense in Australia is found significantly rarely. When it comes to Siberia, the results also showed a significant effect on the worldwide distribution of nominal tense (p-value = 0.02842, 0.95C.I. = 1.208862, OR = 4.90341). The values are more extreme in comparison to North America, however still less significant than South America.

5.1.3. Discussion and limitations

All in all, the H0 was rejected for three macro-areas (South America, North America and Siberia) and, respectively, the frequent occurrence of languages with nominal tense in these macro-areas can be statistically proven as non-random. At the same time, non-occurrence of nominal tense in Africa and Papunesia, as well as rare occurrence in Australia, can not be reported as significant, or, in other words, it can be considered as close to random. Thus, it is not surprising that a language macro-area lacks nominal tense, however some macro-areas have an unexpectedly big number of languages that possess this feature. The

most noticeable influence on the cross-linguistical placement of nominal tense has South America, a smaller effect also comes from North America and Siberia. Respectively, further micro-analyses are needed in order to determine how this feature presumably spread and developed in a relatively huge number of language families in various language macro-areas.

The results of the macro-analysis should be taken considering a number of limitations. First of all, if no languages with nominal tense in a sample of a macro-area are found, it does not mean that there are no such languages in the macro-area at all. For example, as it was mentioned before, Somali language in Africa has nominal tense (Lecarme, 1996; 2012), however it was not chosen for the sample. At the same time, it is not a big problem, because in the case of Africa one language will not make a huge difference on its values. A bigger problem is that the Siberian sample is presented only with nine languages, so the choice of a particular language in each family there can noticeably change the values from slightly significant to slightly insignificant. Two other limitations lie in the way grammars and dictionaries are built. First, in a lot of languages with nominal tense-like categories it is expressed with derivations, and derivations are sometimes described in grammars only partially or not described at all. Also, as it was discussed in Chapter 1, the definition of nominal tense is quite recent, and I also included in the current research nominal tense-like categories which have not been analyzed as nominal tense before, so despite the meticulous investigation of all grammars the possibility that some of nominal tense-like affixes could stay unattested should also be taken into consideration. Thereby, zero value for each language does not mean that a language definitely lacks nominal tense, instead it should be interpreted as it is unattested and not described for it.

Further in this paper I am going to discuss two distinct cases of nominal tense in Siberia with respect to the preconditions of their development.

3. Nominal Tense in Siberia

As the statistical evidence has shown, nominal tense-like categories are found in Siberia significantly often in comparison to other macro-areas. Accordingly, the preconditions of such a phenomenon have to be clarified. In this chapter I present two cases of nominal tense-like categories that are found in Siberia: destinative and adnominal derivations with semantics of tense (further ‘NT-derivations’). The former are found in a number of Tungusic and Samoyedic languages, while the latter occur in a vast range of languages of different genealogical affiliation. I observe these cases separately with respect to the history of language contacts in Siberia in order to find out which circumstances could cause more frequent occurrences of different nominal tense-like categories than is expected.

3.1. *Destinative*

I am going to use the term ‘destinative’ to refer to two grammatically different categories with similar meaning, that are found in North-Samoyedic and Tungusic languages. For a particular case of destinative in North-Samoyedic I will use the term ‘predestinative’, while for Tungussic — ‘destinative case’, because these two grammatical categories have significant differences in structure so they have to be treated as two different comparative concepts when it is relevant. First I provide a brief overview of language history and genealogy for the families in question.

3.1.1. *Uralic (Samoyedic, North-Samoyedic)*

Uralic family is a huge language family that sprawls from Fennoscandia in the northwest and Central Europe in the southwest to Taymyr peninsula in the northeast. The ancestor of all modern Uralic languages — a language or, what is more likely a dialectal continuum — presumably formed either in Western Siberia (Castren, 1849 via Saarikivi, 2022; Janhunen, 2009 via Saarikivi, 2022) or in Volga region (Hajdú, 1966 via Saarikivi, 2022) in approximately 20-25th century BC (Saarikivi, 2022). The divergence of Proto-Uralic is still under discussion: while the modern affiliation of languages to different genealogical groups is almost undoubtful, the history of division still remains unclear. As it is North-Samoyedic languages that are needed for the following analysis, I would like to comment on its peculiarities of classification. Some researchers claim that Proto-Samoyedic separated directly from Proto-Uralic either at approximately the same time as ancestors of other future branches of Uralic family (e. g. Salminen, 2002). Another point of view is that Proto-Samoyedic language was released directly from Proto-Uralic, however it happened

noticeably earlier than the other proto-languages did (Janhunen, 2009). Finally, some propose that Samoyedic and Ugric languages have a common ancestor that first diverged from Proto-Uralic and only after this separated onto Proto-Samoyedic and Proto-Ugric (Häkkinen, 2009 via Saarikivi, 2022). I consider all the hypotheses to be possible in the light of current research, because the only sub-branch where predestinative is found is North-Samoyedic, and hypotheses on this level do not include North-Samoyedic languages in different groups.

The most possible place of origin for Proto-Samoyedic and the whole Samoyedic branch is a triangle “Tomsk–Krasnoyarsk–Yeniseysk” (Helimski, 2000) and it is dated to approximately 10th-6th century BC (Saarikivi, 2022). The future divergence of Proto-Samoyedic is also under debate: Nganasan either form a North-Samoyedic subbranch along with Nenets and Enets (Helimski, 1982 via Helimski, 2022; Katz, 1987 via Helimski, 2022; Futaky, 1988; Saarikivi, 2022), or separated earlier directly from Proto-Samoyedic and, respectively, can be compared with a common proto-language of Nenets, Enets, Selkup, Kamas and Mator (Janhunen, 1991 via Helimski, 2022; Janhunen, 1998 via Helimski, 2022). The question of Samoyedic divergence here is important, because the second hypothesis almost excludes scenarios when predestinative developed in proto-language from translative case which offsprings are present in different Uralic languages, because it is found in Nganasan while Selkup, Kamas and Mator languages lack it. Thus, predestinative could either spread on North-Samoyedic languages via contacts between them (I am going to discuss this possibility later in 3.1.8), or existed in Proto-Samoyedic and then got extinct in Kamas, Mator and Selkup branches. In contrast to Finnish translative case, Selkup translatives are not formed from Proto-Uralic form **-ksi* as Samoyedic predestinative is (Wagner-Nagy, 2017; for more information about predestinative and **-ksi* see in 3.1.3), while Kamas and Mator do not have translative at all.

3.1.2. Tungusic

The Tungusic language family includes languages of peoples that inhabit Siberia, Russian Far East and Manchuria territories. The family is relatively recent: the most possible time of Proto-Tungusic language divergence dates back to 6th century AD (Oskolskaya et al., 2022: 147), however different methods showed different results in dating of Proto-Tungusic breakup: from 10th century BC to 8th century AD (discussion in Wang and Robbeets, (2020): 5; Oskolskaya et al., 2022: 147). There has been a wide discussion of both Proto-Tungusic place of origin and the genealogy of Tungusic family. It should be noticed that instead of postulating a precise and immobile place of origin (Urheimat), a vast area of ancient

migrations should be imagined (Urwandergebiet; Menges, 1968). A lot of territories were assumed to be aboriginal for Tungusic peoples. An overview of these hypotheses is provided by Wang and Robbeets (2020):

1. Baikalia and Transbaikalia area (Vasilevič, 1969; Anikin & Helimski, 2007): the proposition is based on archaeological finds of Okladnikov in South Baikalia (such as Okladnikov, 1955) and, according to this hypothesis, Proto-Tungusic language is associated specifically with Serovo neolithic culture of 4th–3rd century BC (Vasilevič, 1969). In the light of the latest research, Proto-Tungusic language scarcely lays in this time scope (Oskolskaya et al., 2022), genetic evidence and diversity hotspot principle does not support this hypothesis as well (Wang & Robbeets, 2020).
2. Mid- and Upper-Amur area, a territory southwards from Stanovoy Range: this hypothesis was proposed in a number of archaeolinguistic works (Janhunen, 1996; Korovina, 2011; Pevnov, 2012) and supported by diversity hotspot method in (Wang & Robbeets, 2020: 5), admixture analysis in (ibid.: 9), and data about the migration of Y-chromosome haplogroup C2a-M86 specific to modern Tungusic populations (Liu et al., 2020). At the same time this hypothesis received no support from archaeolinguistic research based on agricultural and botanical terms and word for ‘iron’ (Wang & Robbeets, 2020: 5–7).
3. Ussuri basin and lake Khanka area: this location was introduced by Robbeets et al. (2020) drawing from formerly described archaeolinguistic research (Robbeets et al., 2020: 761–764; Wang & Robbeets, 2020: 5–7) and backed by genetic evidence and diversity hotspot principle (ibid. 5, 9). In that case early Tungusic formations can be associated with Krounovskaya, Ol’ga and Pol’tse cultures (Robbeets et al., 2020: 761–764; about cultures in question see (Brodjanskij, 1987)).
4. The Yalu River region: the territory was proposed in (Janhunen, 2012), however later reanalyzed in (Robbeets et al., 2020: 762) as a presumable place of origin of Macro-Tungusic, the hypothetical “forebear” of Proto-Tungusic and some other extinct branches that could probably be related to it, whereas Proto-Tungusic motherland was located northwards.

In the current research I would consider a Tungusic Urheimat (or, more precisely, Urwandergebiet) to be located on a wide area of Amur and Ussuri basins, which corresponds to hypotheses 2 and 3, because both of them have a consistent basis of evidence and there is no need to determine the place of Tungusic motherland more precisely.

The genealogical classification of Tungusic languages have also been widely discussed during the whole span of Tungusology. There are two main traditions of Tungusic genealogy based on two different juxtapositions. The first one is a north-south classification where north Tungusic languages, namely Evenki, Even, Negidal, Solon, Oroqen (Tsintsius, 1949a) and sometimes also Udihe and Oroch (Janhunen, 2012), are counterposed to south Tungusic languages (all the other languages). Another tradition proposes an early divergence of Manchu branch (Manchu, Jurchen, Xibe) from Tungusic in a narrow sense and then either Ewenic (e. g. Korovina, 2011) or Nanaic branch (e. g. Kazama, 2003 via Oskolskaya et al., 2022) subdivided from the rest of the languages. The most recent research presented in (Oskolskaya et al., 2022) used Bayesian phylogenetic methods applied to a dataset of 1110 cognacy classes for 254 lexical items from Leipzig-Jakarta and Swadesh lists. The results of this statistical analysis supported the North-South hypothesis with Orochic group in the South branch, so I am going to build my discussion starting from this genealogy, although it contains some questionable points such as clustering of Negidal and Even or division of Oroch and Udihe right from the North branch without assembling them into Orochic group.

In order to find the commonalities and differences between destinative in Samoyedic and Tungusic and propose its contact origin based on the found commonalities an overview of destinative structure, semantics and use is needed. In the next sections I describe the main features of Samoyedic predestinative and Tungusic destinative case focusing on their comparison.

3.1.3. Predestinative in North-Samoyedic languages

In Samoyedic languages, namely North-Samoyedic languages — Tundra and Forest Nenets, Forest and Tundra Enets, Nganasan — destinative is traditionally described as a specific predestinative or beneficiary declension type along with non-possessive and possessive declensions (Siegl, 2022; Wagner-Nagy, 2022) or as a specific “form” without giving it a typologically universal status (Burkova, 2022). However, in recent research destinative was often claimed to be a nominal tense category. Helimski (1994: 204) was the first one to propose nominal tense semantics for predestinative on the basis of Nganasan language, later this idea was also supported by some researchers (Nikolaeva, 2015 for Tundra Nenets; Leisiö, 2014 for Nganasan). Nikolaeva (2015) proved that predestinative fulfills all the requirements given by Nordlinger and Sadler (2008), and, respectively, Samoyedic languages and Tundra Nenets in particular has a grammatical category of nominal tense applied to possession which consists of a null marker for present nominal possession and

predestinative marker for future nominal possession (Leisiö, 2014: 44). Nikolaeva (2015) also proposed that semantic properties of predestinative are closer not to tense, but to modality (inherently modal future tense). For the nominal tense paradigm in Nganasan Helimski (1994) proposes also a suffix *-d'əə-* with preterite meaning, however if predestinative modifies only possessive component of a nominal, *-d'əə-* can also modify existential property of a nominal (Leisiö, 2014: 52; the case of *-d'əə-* I am going to describe later in 3.2.2).

I am going to present the information about three out of five languages: Tundra Nenets, Forest Enets and Nganasan, because in these languages predestinative is described in a most thoroughgoing way. Table 7 presents predestinative forms for these three languages. All these forms can be reconstructed to a proto-Samoyedic form **-Tə-* (Salminen, 2014).

Table 7: Predestinative forms in North-Samoyedic languages.

Language	Underlying form	Possible realizations
Forest Enets	<i>-ZO-</i>	SG: <i>-zo-</i> , <i>-to-</i> , <i>-do-</i> , <i>(-z-)</i> PL: <i>-zi-</i> , <i>-ti-</i> , <i>-di-</i> (Khanina & Shluinsky, 2010)
Tundra Nenets	<i>-Tə-</i>	<i>-də-</i> (Nikolaeva, 2014)
Nganasan	<i>-Tə-</i>	<i>-tə-</i> , <i>-ďə-</i> (Leisiö, 2014)

As it was proposed in (Janhunen, 1989) and further discussed in (Salminen, 2014) Samoyedic predestinative seems to have the same origin with Finnish Translative case (Salminen, 2014) or Hill and Meadow Mari Lative case (Ylikoski, 2017). All these grammatical categories can form the meaning of function and designation, see Examples 12–14.

(12) HILL MARI

məŋ *täländä* *pišok* *tədəm* *βät-eš-tä*
 I you.DAT very she.ACC wife-**LAT-2PL**
kandaš *soβetajem*
 lead.INF advise.1SG

‘I strongly advise you to take her **as your wife**’. (Alhoniemi, 1985: 55; in Ylikoski, 2017)

(13) FINNISH

<i>minä</i>	<i>neuvon</i>	<i>teidä</i>	<i>kovasti</i>
I	advise.1SG	you.PART1	strongly
<i>ottamaan</i>	<i>hänet</i>	<i>vaimo-kse-nne</i>	
take.INF	she.ACC	wife-TRA-2PL	

‘I strongly advise you to take her **as your wife**’. (Alhoniemi, 1993: 55; in Ylikoski, 2017)

(14) TUNDRA NENETS

<i>tyuku^o</i>	<i>wæsakoh</i>	<i>nye</i>	<i>nyúm</i>
this	old.man.GEN	woman	child
<i>nye-d^o-n-ta</i>	<i>me^oda</i>		
woman-PRED-GEN-3SG	take.3SG>SG		

‘He took that old man’s daughter **as a wife for him**’. (Tereshchenko, 1965: 291; in Ylikoski, 2017)

According to (Janhunen, 1989), all these markers go back to Proto-Uralic **-ksi-* which formed into **-Tə-* in Proto-Samoyedic and further to Modern Samoyedic languages such as Nganasan, Forest Enets and Tundra Nenets. Leisiö (2014: 48) also supports this hypothesis. Later I will consider that hypothesis in discussion about the possible contact origin of this feature.

Structural and semantic properties of predestinative are similar in all Samoyedic languages, though some intra-language differences can also be found. Predestinative has a specific fixed slot in a word form. In Tundra Nenets nouns with predestinatives are unmarked for number, and predestinative is placed after stems and before possessive suffixes, as in Example 15.

(15) *ŋəno-də-m'i*

boat-PRED-POSS.1SG

‘a boat destined for me’ (Nikolaeva, 2014)

Unlike Tundra Nenets, nouns distinguish singular, dual and plural number of a host noun. In case of singular (e. g. 16) and plural (e. g. 17) predestinative markers can be

analyzed in two ways: either as two distinct markers: predestinative *-z/-t/-d/-* and number, *-o/-Ø-* for singular and *-i-* for plural (the latter is the same as plural marker in possessive forms of nouns) or as their fusion into a single marker. The case of dual number is complicated because of its rarity, however the recent data showed that a dual number marker precedes a singular predestinative marker as in Example 18 (Khanina & Shluinsky, 2010: 248–250).

- (16) *entʃi-do-jʔ*
 man-PRED.SG-POSS.1SG.NOM/ACC.SG
 ‘a man destined for me’. (Khanina & Shluinsky, 2010: 248)

- (17) *mɛ-ti-naʔ*
 tent-PRED.PL-POSS.1PL.GEN.SG/PL
 ‘tents destined for us’. (Khanina & Shluinsky, 2010: 249)

- (18) *te-xu-zo-z*
 reindeer-DU.POSS-PRED.SG-POSS.2SG.GEN.PL
 ‘(two) reindeers destined for you. (Khanina & Shluinsky, 2010: 250)

In Nganasan predestinative precedes number, case and possessive markers (Leisiö, 2014: 44; e. g. 19).

- (19) *taa-δə-mtə* *təδaqa-ŋ*
 reindeer-PRED-ACC.2 bring-2
 ‘You brought a reindeer for yourself’. (Tereshchenko, 1979: 102–103)

In all three languages predestinative co-occurs with three grammatical cases: nominative, accusative and genitive. Nominative and accusative predestinatives only modify possessive meaning from ‘X owned by Y’ to ‘X which is destined to Y’ or, in other words, ‘X which will be owned by Y’ (e. g. 20–22) and nominals are still used in subject and direct object positions respectively. Genitive-marked nominals with predestinative form so called ‘functive’ meaning: ‘X as an Y’, as in Example 22.

(20) NGANASAN

taa-δə-mə *tuqə*
reindeer-PRED-1 come.3

‘A reindeer came for me’. (Tereshchenko, 1979: 102–103)

(21) TUNDRA NENETS

kniga-də-mt° *padə-d°m*
book-PRED-ACC.2SG write-1SG

‘I wrote a book for you’. (Nikolaeva, 2014: 74)

(22) FOREST ENETS

fit *te-zo-niʔ* *pɔzarɔ-da-zʔ*
you.ACC reindeer-PRED.SG-1SG.GEN.SG harness-FUT-1SG.SUBJ

‘I will harness you instead of a reindeer’. (Khanina & Shluinsky, 2010: 256)

As it was said before, recent research often interpret predestinative to be a modifier of possession with future meaning. One of the reasons for that is the fact that in most cases predestinative cannot be used without possessive markers, since it is a possessive marker that bears the meaning modified by predestinative (Nikolaeva, 2014; Nikolaeva, 2015). However, there still is a number of cases where predestinative case occurs without following possessive markers. In North-Samoyedic languages if possessor is expressed by a nominal, instead of head marking of possession dependent marking is used: possessor is marked with genitive case, while possessee usually remains unmarked. Hence, in case of lexical possession predestinative can be used with dependent-marked possessive construction and, respectively, without following possessive suffix. Thus, the possessive suffix on the head of a possessive phrase is optional in Forest Enets (e. g. 23) and Tundra Nenets and even forbidden in Nganasan (e. g. 24). All in all, predestinative modify the meaning of the whole possessive phrase no matter whether possession is marked on the same word as predestinative.

- (23) *ni'e-niʔ* *nɛ-z* *pe-l-da-zʔ*
child-1SG.GEN.SG woman-PRED.SG search.for-INCH-FUT-1SG.SUBJ
‘I will search for a wife for my child’. (Khanina & Shluinsky, 2010: 253)

- (24) *d'esī-nə* *ŋəmu-δə*
 father-GEN.1 tobacco-PRED
**d'esī-nə* *ŋəmu-δə-tu*
 father-GEN.1 tobacco-PRED-3
 'tobacco destined for my father'. (Leisiö, 2014: 43)

A more remarkable case of possible non-possessive use of predestinative is when the prospective possessor is inanimate and the semantics of predestinative becomes more similar to purposive meaning rather than to functive meaning or, a fortiori, the future possession (e. g. 25). A similar phenomenon is found in Nanai and will be discussed later (see. Chapter 3.1.7).

- (25) *hotəδə-δə* *tubaqkə* *beritəndi-m*
 cover-PRED skin cut-1
 'I cut the skin in order to make a cover'. (Tereshchenko, 1979: 108)

Finally, one more difference in use of predestinative found in Nganasan is that in cases where possession denotes family affinity relation predestinative forms can be lexicalized and occur in unusual circumstances. Leisiö (2014: 47; e. g. 26) provides an example of predestinative that follows the stem *biŋi* 'son-in-law' and precedes lative case, which is unexpected there, and claims that it is possible because of the lexicalization of predestinative.

- (26) *biŋi-δə-tə-nə* *maδajšül'übtü-d'üə-m* *tuubiδ'iq-mə*
 son_in_law-PRED-LAT-OBL.1 give_as_a_present-PST-1 gun-1
 'I gave my future son-in-law a gun as a present'. (Leisiö, 2014: 47)

3.1.4. *Destinative case in Tungusic*

Not all the languages of Tungusic language family have destinative in their grammatical inventories. The wholesome description of destinative case in Tungusic is presented in (Kazama, 2012). Table 8 presents languages with destinative case markers. Only several languages from the table show the same diachronic origin of destinative: according to (Tsintsius, 1949a: 237), in Even, Oroch, Ulch and Nanai destinative markers can be

reconstructed to a common proto-form, while Udihe and Oroch get out of the pattern and presumably developed destinative from another source.

Table 8: Destinative case markers in Tungusic languages.

Language	Destinative suffix	Source
Even	<i>-ga-/ka-/ŋa-</i>	(Malchukov, 1995; Novikova, 1960 via Kazama, 2012; fieldwork, 2021)
Udihe	<i>-na</i>	(Nikolaeva & Tolskaya, 2001; Shnejder, 1936 via Kazama, 2012)
Oroch	<i>-la-/ja-/na-</i>	(Boldyrev & Avrorin, 2001; Tsintsius, 1949b via Kazama, 2012)
Nanai	<i>-go-</i>	(Avrorin, 1948; 1959; 1961)
Kilen	<i>-na-</i>	(Sunik, 1958 via Kazama, 2012); (Boldyrev & Avrorin: 2001)
Ulch	<i>-dʒu-</i>	(Stojnova, 2020; Petrova, 1936 via Kazama, 2012)
Orok	<i>-do-</i>	(Ozolinja, 2013; Ikegami, 1956 via Kazama, 2012)

Unlike Samoyedic languages, destinative in Tungusic does not have a specific slot in a word form. Instead of this it occurs in a case slot being in complementary distribution with other cases (e. g. 27–28 from Even). Thus, it follows the stem and plural number suffix and precedes possessive marker and, in the case of Nanai, oblique case marker (e. g. 29). The following possessive suffix is obligatory in all languages. Due to its location in a word form, destinative was traditionally described in a case paradigm with no doubt, however Malchukov (2008: 646) pinpoints a number of features unusual for other cases that are found in Even destinative. More features of destinative distinct from other cases are also presented in (Baklanov, 2021) along with the proposition of semantic and structural similarity of destinative to nominal tense.

- (27) *bi aw-ri-wu min mašina-wa-n*
 I wash-PST-1SG my car-ACC-POSS.3SG
 ‘I washed my car’. (fieldwork, 2021)

- (28) *bi aŋa-ni-wu anton urbak-ka-n*
 I sew-PST-1SG A. shirt-DST-POSS.3SG
 ‘I sewed a shirt for Anton (that is destined for Anton)’. (fieldwork, 2021)
- (29) *min ag-bi dangsa-go-i-wa ga-či-ni*
 my brother-POSS.1SG book-DST-POSS.1SG-OBL buy-PST-3SG
 ‘My brother bought me a book’. (Avrorin, 1959: 179; also Example 36)

In all aforementioned languages destinative can mark direct object instead of accusative case as in examples 27–29 above. Thus, direct object marking is a prototypical function of destinative in Tungusic. What distinguishes the destinative direct object from the accusative one is a ‘future possession’ meaning, which is similar to the one described in 3.1.3. concerning North-Samoyedic. Another use of destinative marking which is found in Even, Nanai, Udihe and Oroch is with clausal adjuncts with ‘factive’ meaning (e. g. 30–31), which is semantically similar to genitive use of predestinative. It seems to have a restricted use with predicates. For example, in Even it either occurs with intransitive verbs or with transitive verbs where the direct object slot is already taken by an accusative direct object, while its occurrence with labile verbs or with destinative direct object is ungrammatical.

- (30) UDIHE
sii sitə-wə-i gəənə-mi
 your child-ACC-POSS.2SG come.to.ask-SIM
bii mamasa-na-mi
 my wife-DST-POSS.REFL.SG
 ‘I have come to ask for your daughter to become my wife’. (Kazama, 2004: 558
 via Kazama, 2012)

- (31) EVEN
bi bak-ri-wu anton men ge-ga-ji
 I find-PST-1SG A. REFL friend-DST-POSS.REFL.SG
 ‘I found Anton as a friend to myself’. (fieldtrip, 2021)

The rarest function of destinative in Tungusic is subject marking with the same ‘future possession’ meaning (e. g. 32–33). The subject use of destinative is undoubtedly

attested only in Even and Nanai, however both languages are relatively well-described, which means that in other languages the destinative marking of subject could be probably present but not noticed.

- (32) NANAI

<i>asi-gu-a-si</i>	<i>ji-dii=a</i>
wife-DST-OBL-POSS.2SG	come-PRS.PTCP=CLT

‘There comes a woman who is supposed to become your wife’. (Kazama, 1998: 125 via Kazama, 2012)

- (33) EVEN

<i>olla-ŋ-ga-ku</i>	<i>xalad'il'nik-dula</i>	<i>bi-si-n</i>
fish-AL-DST-POSS.1SG	fridge-LOC	be-PST-3SG

‘A fish destined for me was in the fridge’. (fieldwork, 2021)

Thus, possible syntactic functions of destinative case among Tungusic languages are summarized and presented in Table 9. I do not deny the possibility that some syntactic positions could stay unattested and undescribed in grammars instead of being ungrammatical. I put “NA” instead of “–” if I found no evidence that destinative cannot occur in a particular syntactic position in a particular language.

Table 9: Destinative case markers in Tungusic languages.

Language	Direct Object	Functionive Adjunct	Subject
Even	+	+	+
Udihe	+	+	NA
Oroch	+	+	NA
Nanai	+	+	+
Kilen	?	?	?
Ulch	+	NA	NA
Orok	+	NA	NA

The description of destinative case in Tungusic would not be complete without mentioning the so-called indefinite accusative that is found in Evenki (Nedjalkov, 1997), Negidal and Solon (Kazama, 2012: 143). All these languages lack destinative case as well as languages with destinative lack indefinite accusative, and these cases share some semantic traits. Thereby, indefinite accusative in possessive phrases bears the same meaning as destinative (e. g. 34). One more common trait is that participants that are marked with both destinative and indefinite accusative tend to be absent in the described situation, but are expected to appear in it later — in Evenki nouns with indefinite accusative tend to co-occur with verbs in future imperative (Bulatova, 1987 via Kazama, 2012: 146).

(34) EVENKI

d'av-ja-tyn *o:-kallu*

boat-ACCIN-POSS.3PL make-IMP.2PL

‘Make a boat destined for them’. (Nedjalkov, 1997: 154)

Unfortunately there have not been found any diachronic proof of indefinite accusative relatedness to destinative so far (Kazama, 2012: 144). Suffix *-ja-* reminds the one found in Oroch, however the connection between them is not proven and doubtful.

3.1.5. *Comparison of destinative features in Tungusic and Samoyedic*

Tungusic destinative case and Samoyedic predestinative share a number of common traits that suggest possible contact provenance of this feature. First of all, in both genera destinative bear the same meaning ‘X destined for Y’ or ‘Y’s future X’. The similarity is more clear if we try to interpret Tungusic destinative as a future possession modifier instead of a case that characterizes the connection between verb and participant. Moreover, both in Samoyedic and Tungusic languages destinative occurs on nominals that represent up to three syntactic roles: subject, direct object and functive clausal adjunct (genitive destinative in Samoyedic); subject position is possible with a restricted class of verbs everywhere. Also both Tungusic and Samoyedic destinatives occur almost exclusively on the head of the possessive phrase (see. 3.1.3. for exceptions in Nganasan). One more observation is that both in Tungusic (at least in Even; fieldwork, 2021) and in Samoyedic (Nikolaeva, 2014: 211) destinative direct objects cannot be promoted by passive. Finally, in Nganasan (Samoyedic), Nanai and Oroch (both Tungusic) destinative marker can appear on verbs in order to form

purposive meaning, which could probably indicate similar grammaticalization patterns (as well as the source of feature development, see 3.1.7.).

At the same time Samoyedic predestinative and Tungusic destinative case are built differently. The most salient difference is that Tungusic destinative occurs in case slot and, respectively, is embedded into case paradigm, while predestinative has its own place in a word form and co-occur with other cases. Furthermore, if in all Samoyedic languages the syntactic role inventory possible for predestinative marking is consistent (subject, direct object, functive adjunct), in Tungusic some languages may use destinative in all these positions while in others not all syntactic positions are possible for destinative to occur. The set of verbs that are found with destinative subject are also various in Tungusic and Samoyedic. Nikolaeva (2015: 113) claims that destinative cannot occur in contexts like *Your future wife left* or *Your future husband smokes* where it is implied that prospective possessor is already known, while a similar example 35 from Even is completely grammatical.

(35) EVEN

<i>atikan-ga-ku</i>	<i>nurge-ø-n</i>
girl-DST-POSS.1SG	dance-NFUT-POSS.3SG

‘My future wife (lit. a girl, destined to me) is dancing’. (fieldwork, 2021.)

Thereby, even though Samoyedic predestinative and Tungusic destinative have different traits, they still share a lot of common features, which gives rise to a proposition about their relatedness. In the next chapter I am going to describe the details of linguistic contacts, propose the time and place of the contacts, and speculate about the source and the recipient of destinative in Siberia.

3.1.6. Time and Place of language contacts

If we think about how features appear in languages, we can imagine two different ways: either a feature developed in language independently due to some processes (e. g. grammaticalization) or it evolved as a result of language contact (Comrie, 1989). Low probability of the former scenario I have already shown in the previous chapter. In the latter scenario a loan feature can either be a matter-borrowing (MAT), when one language shares a phonological form of a morphological unit with another language, or a pattern-borrowing (PAT), when language copies only some structural and behavioral patterns of a feature but not its phonological form (Sakel, 2007: 15).

There are three possible scenarios of how destinateve could develop in Siberia. The first two scenarios are based on direct contacts of Tungusic and Samoyedic people: 1) it could either develop in Samoyedic and then be borrowed by Tungusic; 2) or it could vice versa be taken by Samoyedic from Tungusic. The third way how it could appear is influenced by a language of unknown affiliation that was present in Siberia many years ago, but got extinct without leaving offsprings, however other languages of Siberia acquired its features. This hypothesis is called ‘the Ancient Siberian Substrate’ hypothesis. I assume that there is no need in the last hypothesis in case of destinateve, because there is a lot of significant evidence of contacts between Tungusic and Samoyedic peoples, so I am not going to pay a lot attention to it in this chapter, however it will appear later in Chapter 3.1. about destinateve and, more in detail, in Chapter 3.2. about NT-derivations. .

Before taking a look at contacts, I would briefly describe the history of Samoyedic and Tungusic people. As it was mentioned before, people that spoke Proto-Samoyedic language lived in a triangle “Tomsk–Krasnoyarsk–Yeniseysk” approximately in 10th–6th centuries BC (Helimski, 2000; Saarikivi, 2022). Later, until around the 1st century AD Proto-Samoyedic started to diverge (Helimski, 2000; Futaky, 1988). As a result of this divergence Proto-North-Samoyedic language formed³. Around the 4th century AD Proto-North-Samoyedic community started to migrate northwards towards the Arctic Ocean to the Circumpolar region (Helimski, 2000). After this, in approximately 5th–6th centuries AD (ibid.) The Proto-North-Samoyedic community started to divide into groups of ancestors of modern Nganasan, Nenets and Enets people. The divergence was triggered by the development of reindeer herding and, respectively, higher mobility of social groups. After the division migrations continued: thus, Nganasan reached the easternmost point of Samoyedic spread on Taymyr peninsula, and Nenets went far westwards to Bolshezemelskaya Tundra in 10th century AD, where they got in contact with Novgorodians and Scandinavians (ibid.). As North-Samoyedic peoples were nomadic, they were roaming all around the North-Siberian tundra area, sporadically running across each other. Sometimes such contacts even caused interethnic wars. Helimski (ibid.) mentions Enets–Nenets wars in 18th–20th centuries AD. At the same time he comments that Nganasan people were quite remote from Nenets and Enets, and therefore their contacts were unlikely to happen. To sum up, the North-Samoyedic community migrated to the Circumpolar area of Ob’ and Yenisey basins in the 4th century

³ As it was mentioned before, not all the researchers support the hypothesis about common Proto-North-Samoyedic language. I prefer to believe in its existence, especially because predestinateve in Nganasan can be reconstructed to the same protoform as in Nenets and Enets languages.

AD, where it diverged onto the ancestors of modern ethnicities, some of which continued to interact with each other until recently.

Whilst the Proto-Samoyedic community dates back to the first millennium BC, Proto-Tungusic society is claimed to be considerably younger. However, according to genetic data (Liu et al., 2020), the first expansion of lineage C2a-M86 which characterizes genomes of people of Tungusic origin happened around 20th century BC. This fact can indicate that around that time the first Tungusic-speaking populations were formed somewhere in Amur and Ussuri basins (ibid; Wang and Robbeets 2020) which can be interpreted as the first step on Proto-Tungusic society formation. I would claim the division of Proto-Tungusic language and society to happen in 5th–6th centuries AD as it is predicted with a Bayesian mixture model (Oskolskaya et al., 2022), however it should be noticed that the calibration points, or, in other words, historical events that can be dated precisely, are quite recent, and the model, respectively, could date the periods of branches' and languages' divergence later than it happened in reality. After this, according to Oskolskaya (ibid.), Oroch seceded from the North branch in 11th century AD, later in approximately 12th–13th century AD the same happened with Udihe. At approximately the same time, according to (Janhunen, 2013), the process of Proto-North-Tungusic language formation started in the Mid-Amur basin. This process was accompanied by the start of extensive migrations to the north presumably caused by the expansion of the Mongol Empire (Robbeets et al. 2020), whilst Proto-North-Tungusic language started to break up around 14th century (Oskolskaya et al., 2022). According to Vasilevič (1964), Okladnikov also mentions Yakut-Tungusic contacts in the Lena-Amga-Patoma area in that period, which suggests that North-Tungusic people had already arrived in this region. During the next four centuries the Tungusic northward expansion continued, so as a result in the 18th century Even and Evenki spread over Siberia (Vasilevič, 1948); while Solon, Khamnigan Evenki and Orochen migrated southwards to China (Janhunen, 2013). For instance, Giorgi (in Vasilevič & Levin, 1951) mentions nomadic Tungusic communities in Lower-Lena area, near modern Okhotsk, in Baunt area (Buryatia) and in Dauria. Finally, in the 19th century AD Even reached Kamchatka, and Evenki arrived at Sakhalin island in the 20th century AD, where they mixed with Ulch descendants and formed the Orok language and ethnicity (Vasilevič & Levin, 1951; Janhunen, 2013). Thus Tungusic peoples expanded on the whole territory of Siberia from Ob' basin on west to the sea of Okhotsk on east. Table 10 presents a comparative overview of Tungusic and Samoyedic history.

Table 10: Samoyedic and Tungusic history in comparison.

Time period	SAMOYEDIC	TUNGUSIC
<i>25th century BC</i>	Formation of Proto-Uralic. (Saarikivi, 2022)	
<i>20th century BC</i>		Expansion of lineage C2a-M86 which is specific to Tungusic peoples. Formation of first Tungusic-speaking populations. (Liu et al., 2020)
<i>10th-6th century BC</i>	Formation of Proto-Samoyedic in Tomsk-Krasnoyarsk-Yeniseysk triangle. (Saarikivi, 2022)	The earliest possible time of division of Proto-Tungusic in the Mid- and Upper-Amur area. (Oskolskaya et al., 2022; Wang and Robbeets, 2020; Robbeets et al., 2020)
<i>1st century AD</i>	Division of Proto-Samoyedic onto groups, formation of North-Samoyedic. (Helinski, 2000; Futaky, 1988)	Latest possible time of divergence of Proto-Tungusic. (Robbeets et al., 2020)
<i>4th century AD</i>	Migration of North-Samoyedic to the circumpolar area. (Helinski, 2000)	
<i>5th-6th century AD</i>	Division of Nganasan and Nenets due to the reindeer herding and respectively higher mobility. (Helinski, 2000)	The most possible time of Proto-Tungusic division in Mid- and Upper-Amur area. (Oskolskaya et al., 2022)
<i>10th century AD</i>	Migration of Nenets to Bolshezemelskaya Tundra, where they contacted with Novgorodians and Scandinavians. (Helinski, 2000)	
<i>11th century AD</i>		Division of Oroch. (Oskolskaya et al., 2022)
<i>12th-13th century AD</i>		Formation of North-Tungusic (ancestor of Even, Evenki, Negidal, Solon, Khamnigan Evenki and Orochen) in Mid-Amur Basin and beginning of its expansion to the north. (Janhunen, 2013) Cause of expansion: Mongol empire (Robbeets et al., 2020). Division of Udihe (Oskolskaya et al.,

		2022). Yakut-Tungusic contacts in Lena-Amga-Patoma area. (Okladnikov via Vasilevič, 1951)
<i>14th century AD</i>		Breakup of North-Tungusic in Mid-Amur Basin with further expansion to the north. (Oskolskaya et al., 2022)
<i>18th century AD</i>	Migrations and following conflicts of Tundra Nenets and Forest Enets. (Helimski, 2000)	Before 18th century Solon, Khamnigan Evenki and Orochen migrated southwards to China. (Janhunen, 2013) Evenki spread over Siberia: Georgi noticed nomadic reindeer Tungusic people in Lower-Lena area, Okhotsk, Baunt (Buryatia) and Dauria. (Vasilevič, 1951) Evenki migrations around Siberia. (Vasilevič, 1948)
<i>19th-20th century AD</i>	Later conflicts of Tundra Nenets and Forest Enets, migration of Forest Enets to the south. (Helimski, 2000)	The latest migrations: Even reached Kamchatka, Evenki reached Sakhalin and participated in Oroch formation (Ulcha that migrated to Sakhalin and mixed with Evenki). (Vasilevič, 1951; Janhunen, 2013) Evenki migrations around Siberia. (Vasilevič, 1948)

According to the history of Tungusic and Samoyedic migrations, we can define the approximate time and place of their contacts. First of all, the hypothesis about early contacts of Proto-Tungusic and Proto-Samoyedic (even Proto-North-Samoyedic) that was expected in (Helimski, 2000) based on borrowing of naming ‘Yenisey’, is inconsistent according to the latest data, because Proto-Samoyedic is considerably older than Proto-Tungusic, and only the descendants of Proto-Tungusic people migrated to the territories adjacent to Samoyedic habitat from Amur and Ussuri basins. The only possible scenario is late contacts on the northwest border of Tungusic expansion and southwest border of Samoyedic territory. According to maps of territories inhabited by Evenki (Vasilevič, 1948; Pakendorf & Aralova, 2020), Even (Pakendorf & Aralova, 2020), Nganasan (Wagner-Nagy, 2022), Forest and Tundra Nenets (Burkova, 2022) and Forest and Tundra Enets (Siegl, 2022), relatively modern

areas of their habitation do not overlap, however high mobility of both Samoyedic and Tungusic people due to reindeer herding could imply their occurrence on even wider territories. One of the places of possible contacts is former Mangazeya uezd, where, according to (Belov et al., 1981: 88), indigenous population was represented mostly by Forest Enets, but also Tundra Enets, Kets and Evenki since the beginning of 17th century, later in the middle of 17th century Nenets also migrated there. I would propose that it was the Ilimpiy (and even probably Anabar) dialect of Evenki language that interacted with Nenets and Enets languages in the colonial period between the 17th and early 20th century AD in former Mangazeya uezd or in modern Turukhan, Taymyr and Evenki districts of Krasnoyarsk krai, namely their borderline area. In the next two chapters I am going to describe both hypothesis about languages that shared and accepted destinative during aforementioned contacts.

3.1.7. Hypothesis 1: Samoyedic → Tungusic

The first hypothesis is based on the assumption that predestinative formed in Samoyedic languages independently and after this was borrowed by one of Tungusic languages (presumably Evenki) and then spread to other Tungusic languages. The source of this feature in Samoyedic was already mentioned Proto-Uralic translative **-ksi*. According to Janhunen's (1989) proposition and Salminen's (2014) justification, Proto-Uralic translative suffix **-ksi* developed in Proto-Samoyedic **-tə* via regular phonological correspondences: PU **-ksi* → PS **-tə* → Nganasan *-tə*, Tundra Nenets *-tə*, Forest Enets *-zo*; which is the same correspondence as found in the word 'ski': -PU **suxsi* → PS **tutə* → Nganasan *tutə*.

It is problematic to propose whether the feature appeared in all Proto-Samoyedic languages and then just was developing on par with other features of Proto-Samoyedic following to Proto-North-Samoyedic and modern North Samoyedic languages, or developed relatively recently only in Proto-North-Samoyedic language after its divergence. Neither this feature nor its cognates are found in Kamas-Selkup and Mator-Taigi-Karagas, even though Selkup languages have translative case developed from another source (Wagner-Nagy, 2017). However, if we consider an earlier division of Nganasan, then predestinative developed in Proto-Samoyedic and then got extinct in Kamas-Selkup and Mator-Taigi-Karagas. One more possibility is a later development of predestinative in Nganasan due to the contacts between it and closely-related Nenets and Enets languages. At the same time, Helimski (2000) does not believe in later contacts of Nganasan due to its remoteness.

After the development of predestinative, it had to be transferred to Tungusic languages, and it is the place where the most fundamental problems are coming. The only

Tungusic language that undoubtedly had contacts with North-Samoyedic languages is Evenki. As we mentioned before in 3.1.4., modern Evenki does not have a destinative case in its paradigm, however indefinite accusative case can presumably be a trace of the destinative that was first borrowed and then got more similar to other cases. But even if this hypothesis is correct, it is still hard to explain how destinative spread to other Tungusic languages that are located in the Far East. Due to reindeer herding, Evenki are known for their high mobility, so vast territories could be covered by Evenki in short periods of time. However I doubt that the connections between different Evenki dialects were strong enough to spread the innovation in question even on easternmost dialects, that contacted with at least one other Tungusic language that could transmit destinative case further. Moreover, all Evenki dialects had to modify the structural and semantic peculiarities of destinative in a similar way, turning it into indefinite accusative in a short period of time after the presumable contact with other Tungusic on east. According to Vasilevič (1948), the processes of migrations among Evenki had been continuing until recently, so even though the dialects underwent the process of their formation before, there still was a space for interaction between dialects. At the same time, there is no evidence of late contacts between remote dialects of Evenki, and Vasilevič (1948; 1964) does not believe in them. According to Klyachko (personal communication, April 22, 2023), sporadic long-range migrations were mentioned by Evenki consultants during her fieldwork, however it was not a systematic process. Such migrations could be triggered by historical events. For example, Klyachko (personal communication, April 22, 2023) mentions multiple migrations from Yakutia to Irkutsk oblast caused by collectivization in the 1930s. However, systematic migrations of different Evenki populations all around Siberia that could be the reason for simultaneous language change of all Evenki dialects in a similar way, are more than doubtful. Further expansion of destinative on other Tungusic languages is also hard to prove, because I could not find any information about late intra-Tungusic contacts, especially in Amur and the Sea of Okhotsk area. That said, Manchu and Xibe do not have destinative in their case system, which can be explained by their remoteness from other Tungusic languages and lack of late contacts respectively. However, Solon does have indefinite accusative in its case paradigm (Kazama, 2012: 143), being as remote as Manchu and Xibe, which is also difficult to explain via language contacts.

Despite the low possibility of such spread of destinative on Evenki and further on other Tungusic languages, its contact origin can be noticed and explained. As it was mentioned before, destinative possesses a number of features unusual for cases. For example, destinative cannot occur without a possessive suffix. Also in Even adjectives do not agree

with destinative nouns in case, instead of this adjectives either stay unmarked (if destinative noun is in subject position) or are marked with accusative (in direct object and functionive clausal adjunct position; fieldwork, 2021). These unusual for Tungusic cases traits suggest a non-case origin of destinative, which can be explained by its alien provenance. Since there were no specific slots in a word form for declension or nominal tense, it was reanalyzed as case preserving unexpected for cases features.

The phonological correspondence between destinative in Samoyedic and Tungusic is not found. That means that it is a case of pattern-borrowing and not matter-borrowing. Moreover, as it was mentioned in 3.1.4., not all Tungusic languages that have destinative case developed it from the same source: in Even, Oroch, Ulch and Nanai destinative presumably has a common proto-form (Tsintsius, 1949a: 237), while it is not attested for Udihe and Oroch. It could probably mean, that Even and Nanaic branch, Udihe, and Oroch developed destinative with use of Samoyedic pattern from different sources.

In case of pattern-borrowing a source for destinative is needed. Malchukov (2008: 646) proposed that Even destinative marker *-ga-* could develop in the process of grammaticalization of a verb *gadaj* ‘give’. Another view on verbal origin of destinative is based on purposive suffixes in different Tungusic languages. First of all, in Nanai the same suffix is used for both destinative case (e. g. 36) and purposive converb (e. g. 37), the following possessive or personal suffixes are also identical (Avrorin, 1959, 1961; Kazama, 2012: 147–148). Avrorin (1961) proposes that purposive suffix developed from destinative, however in case of presumable pattern-borrowing an opposite situation can also be proposed.

- (36) *min* *ag-bi* *dangsa-go-i-wa* *ga-či-ni*
 my brother-POSS.1SG book-DST-POSS.1SG-OBL buy-PST-3SG
 ‘My brother bought a book for me’. (Avrorin, 1959: 179; also Example 29)

- (37) *min-du* *depu-gu-i-wa* *bu-ru*
 I.OBL-DAT eat-PURP-1SG-OBL give-IMP.2
 ‘Give me something to eat’. (Avrorin, 1961: 169)

Avrorin and Boldyrev (Boldyrev & Avrorin, 2001: 117–118) mention the same situation in Oroch: indeed in Oroch destinative suffix can also occur with verbal stems to form purposive meaning (e. g. 38).

- (38) *tada-wa bei-we zawa-xa-ni činde-ke-we wa-la-ji*
 arrow-ACCbow-ACCtake-PST-3SGbird-DIM-ACC kill-**PURP**-REFL.SG
 ‘He took an arrow and a bow to kill the little bird’. (Boldyrev & Avrorin, 2001: 118)

Finally, related evidence can also be found in Even: the paradigm of possessive suffixes for destinative (e. g. 39) differs from the one for other cases (e. g. 40), and partially similar to the paradigm of personal endings of the purposive converb (e. g. 41), while the purposive suffix itself is different from the destinative suffix.

- (39) *min aši-wu ma-ri-n kabiwu-ŋ-ga-ku*
 my wife-POSS.1SG kill-PST-3SG partridge-AL-DST-POSS.1SG
 ‘My wife killed a partridge for me’. (fieldwork, 2021)

- (40) *van'a ga-di-n m'an untə-je*
 V. take-PST-3SG REFL boots-POSS.REFL.SG
min jurta-duku-wu
 my yurt-ABL-POSS.1SG
 ‘Vanya took his fur boots from my yurt’. (fieldwork, 2021)

- (41) *ŋeluki go-ni-n ewi-d-uken-de-ku un-u*
 wolf ask-PST-3SG play-PROG-CAUS-PURP-1SG you.PL-ACC
 ‘The wolf asked me to play with you’. (Pakendorf & Aralova, 2009–2013)

All aforementioned observations show that destinative could possibly develop in Tungusic languages from different purposive-like sources due to Samoyedic influence. However, to clarify this proposition a separate analysis is needed.

As a result the Hypothesis 1 suggests Samoyedic origin of destinative, which afterwards was loaned by Evenki and transmitted on other Tungusic languages. The hypothesis has plenty of advantages. First of all, it easily describes independent predestinative emergence in Samoyedic languages. Moreover, it explains why Tungusic destinative has several distinctions from other cases. Finally, it proposes the reason why destinative cannot be traced to a single common proto-form in Tungusic. However, the hypothesis has serious drawbacks. The most significant drawback is the low possibility of

Evenki to transfer destinate in such a short time back to the area around the place of Tungusic origin and influence other Tungusic languages. Even less possible is the proposition, that all Evenki dialects after this transfer modified destinate into indefinite accusative in a similar way without traceable contacts with each other. Therefore, this hypothesis seems realistic from a linguistic structural point of view, while being completely unrealistic in terms of language contact.

3.1.8. Hypothesis 2: *Tungusic* → *Samoyedic*

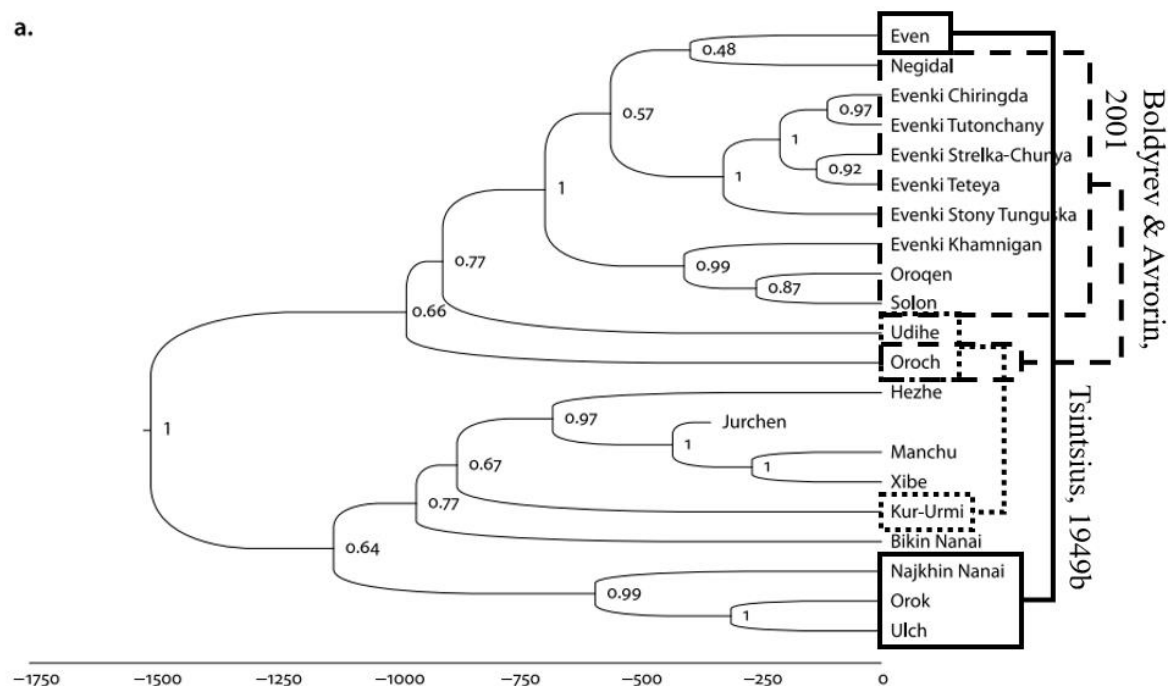
An alternative hypothesis that can be proposed for the origin of destinate is that it first evolved in Tungusic languages and after this it was transferred in a westerly direction where it was acquired by North-Samoyedic languages. In that case, destinate has to derive from a common Proto-Tungusic form⁴. Tsintsius (1949a: 236) proposes destinate as a particular case of such correspondence: Evenki [rg] || Even [rg] || Solon [rg]~[gg] || Negidal [jg]~[dg]~[zg] || Oroch [gg] || Udihe [g] || Orok [d] || Ulch [dʒ] || Nanai [jg]~[g] || Manchu [čʒ]. Based on this correspondence, the connection between Ulch *-dʒu-*, Nanai *-go-* and Orok *-do-* can be noticed. Tsintsius (1949a: 237) also includes Even *-ga-* to the correspondence despite the absence of [r]. Thus, the destinate markers in Oroch and Udihe do not fulfill the correspondence proposed by Tsintsius. However, the case of Oroch is worth additional noticing. According to Kazama (2012: 135), Tsintsius (1949b) mentions the suffix *-ja-* in Oroch and its morphophonological variation *-na-* with *n*-final stems⁵, while the suffix *-la-* was noticed only in dialects. A later work (Kazama, 1996 via Kazama, 2012) mentions the opposite: only *-la-* was found in 25 examples from texts collected by Avrorin and Lebedeva (1966), while *-ja-* was not attested at all. Finally, Avrorin and Boldyrev (2001) mentions both *-la-* and *-ja-*, as well as an allomorph *-na-*. In addition the authors propose, that even though *-na-* in Oroch resembles the suffixes *-na-* in closely related Udihe and less related Kilen, it is not likely that they have the same origin, because the occurrence of *-na-* in Oroch is caused by morphophonology. However, personally I would not exclude the possibility that exclusive use of *-na-* in Udihe and Kilen can be explained by its extension from *n*-final occurrences to other stems. Instead, Avrorin and Boldyrev suggest relatedness of Oroch suffix *-ja-* (or even *-a-*) to indefinite accusative in Evenki *-ja-/a-*. Figure 1 shows how different destinate markers are presumably related in Tungusic languages: Even destinate can be reconstructed

⁴ I use the classification provided in (Oskolskaya et al., 2022).

⁵ Stems that in some contexts end on *-n*, e. g. *aki(n)* ‘older brother’, *inaki(n)* ‘dog’, etc. (Boldyrev & Avrorin, 2001).

to the same proto-form with Nanaic, whilst Northwestern Tungusic could have developed from the same source with Oroch. At the same time, Oroch relates to Udihe and Kur-Urmi.

Figure 1. Possibly related destiative forms in Tungusic.



Such difference in origin and impossibility to trace all suffixes to a single common proto-form makes it doubtful to propose that an ancestor of destiative case appeared in Proto-Tungusic. There are two possible options of how it could have happened: 1) These forms are related, but we so far failed to reconstruct the proto-form and connect them; 2) It developed independently in one language or one branch and spread afterwards first on other Tungusic languages and then on North-Samoyedic.

The language that could transfer this feature from the Far East to Northwestern Siberia is, as in Hypothesis 1, Evenki. Because, as it was discussed in 3.1.6., the contacts were late, Evenki could only contact with relatively modern Samoyedic languages such as Nenets and Enets, and not with a hypothetical Proto-North-Samoyedic language. Then, the occurrence of predestinative in all Nenets, Enets and Nganasan languages has to be described in another way rather than its diachronic development, taking into consideration the relatedness of predestinative to Proto-Uralic translative **-ksi*. According to (Ylikoski, 2017), translative case in Finnish and lative case in Hill Mari that are diachronically related to Samoyedic predestinative can form functive meaning as well as genitive predestinative (see. Chapter 3.1.3.), however it does not occur in subject and direct object position. I would

suppose that Proto-Uralic translative was preserved in all Samoyedic languages, then it became extinct in Kamas-Selkup and Mator-Taigi-Karagas. After this, it underwent Evenki influence, and as a result it got reanalyzed as a different grammatical category distinct from case. In addition, the former translative case developed the Tungusic pattern, namely acquired subject and direct object use of predestinative, and received the possibility to attach case markers. It could happen with a single language, and then the grammaticalization pattern shared via language contacts of closely related North-Samoyedic languages. Thus, a North-Samoyedic translative-like grammatical category could borrow several patterns in Tungusic destinative case's behavior.

As we noticed before, Evenki could only interact with modern Samoyedic languages. At the same time, it is difficult to imagine that Nenets, Enets and Nganasan languages all contacted distinctly with Evenki, developing exactly the same translative suffix in exactly the same way. The spread of predestinative can be explained by the fact of contacts that happened until recently between modern North-Samoyedic languages as it was described in Chapter 3.1.6. Unfortunately, there is no evidence of contacts of Nganasan with Nenets and Enets languages. On the contrary, Helimski (2000) mentions that the Nganasan area of habitat was located quite remote from other North-Samoyedic languages, and, respectively, it is not likely that Nganasan had linguistic contacts with Nenets and Enets. All in all, most of the details of contacts proposed by this hypothesis still remain unclear.

As well as Hypothesis 1, Hypothesis 2 also has a number of pros and cons. First of all, the second hypothesis does not need to describe the reversed movement of Evenki in order to explain how Evenki first got in contact with Samoyedic languages and, subsequently, with other Tungusic. At the same time, Hypothesis 2 does not clarify how all Evenki dialects modified destinative to indefinite accusative in a similar way after the contact with Samoyedic. The late spread of destinative after languages had already diverged is more likely to be postulated for Samoyedic rather than for Tungusic due to the following reasons. First, the territory which is inhabited by North-Samoyedic languages is less vast than the area occupied by people of Tungusic languages with destinative. Moreover, there is historical evidence of contacts between at least Nenets and Enets people (see. Chapter 3.1.6.), while I could not find any information about late contacts of Tungusic peoples in Priamurye and the Sea of Okhotsk region which could explain how destinative spread out the languages it presents nowadays in. The second hypothesis does not contradict the information about Proto-Uralic translative origin of predestinative in Samoyedic languages as well, however it does not fit well with the fact that destinative case markers in Tungusic languages seem to

have different origin. All in all, Hypothesis 2 seems more possible from the perspective of language contacts than Hypothesis 1, even though it leaves a lot of unclear and indescribable moments.

3.1.9. Hypothesis 3: *The Ancient Siberian substrate hypothesis*

Considering the drawbacks of two formerly described hypotheses, a brief comment on the possibility of substrate influence has to be made. More information about the hypothesis itself is provided in Chapter 3.2.13. If both Hypothesis 1 and Hypothesis 2 are problematic to accept due to the peculiarities of direct contacts between genera, a possibility of indirect contacts should also be taken into consideration. Applying this hypothesis to the case of destinative, both genera could have contacted with an unknown language that had a destinative-like category in its inventory.

The advantages of this point of view is the following: 1) The contacts could happen way earlier between an unknown language and proto-languages, so both families could have borrowed destinative as in both genera they show some pattern-borrowing behavior — this possibility could probably resolve the problem of indefinite accusative in Evenki; 2) The area where a hypothetical language could be spoken is undefined, so it could presumably spread enough westwards to have contacts with Proto-Samoyedic and enough southwards to border with Tungusic languages; 3) Gusev (2021) proposes its affiliation to Eskimo-Aleut languages, whilst Central Siberian Yupik and Kalaallisut have suffixes which can also express similar to destinative meaning: in Examples 42–43 they also modify possession into predestination.

- (42) *tunissuti-ssa-q niviarsia-mut pisiara-ara*
 gift-NFUT-ABS girl-ALL buy-1SG.SUBJ/3SG.OBJ-INF
 ‘I bought a gift for a girl’. (Fortescue 1984: 213; also Examples 2, 86)

- (43) *ikaiorti-ka-qa*
 assistant-NFUT-POSS.1SG
 ‘my future assistant’. (Hinz, 1955 via Menovschikov, 1962: 95; also Example 75)

However, this hypothesis has a really considerable drawback: it is neither falsifiable, nor confirmable in case of destinative. There is no material evidence of presence of people that spoke an unknown substrate language, as well as no its direct languages-offsprings with

destinative-like categories are found. Hence this hypothesis should be seriously taken into consideration only if the hypotheses based on the direct contacts of Samoyedic and Tungusic languages are proven false, and to prove this a deeper research is needed.

3.1.10. Discussion and limitations

So far, both hypotheses based on direct contact do not completely fit all the information we have about destinative in Samoyedic and Tungusic languages, especially in some details of linguistic contacts between genera. At the same time, both hypotheses propose a number of common aspects which seem to be correct regardless of the way destinative developed. First of all, the contacts are not likely to happen earlier than 14th century AD: the divergence and following expansion of North-Tungusic to the north started to happen in this period and the presence of both Evenki and Samoyedic peoples was attested in the 17th century near Mangazeya (see. Chapter 3.1.6.). Both hypotheses also support that only the pattern was borrowed and not a marker itself; the sources of possible development of destinative are also found in both genera. Also, according to both hypotheses, destinative was first taken by a single language in recipient genus and then transferred further to other languages in this genus — it is the only way how to describe the occurrence of destinative in multiple languages in each genera, considering that the contacts happened after their divergence. Finally, both hypotheses struggle with the fact that all described Evenki dialects (according to Vasilevič, 1948) nowadays do not have a destinative case, having indefinite accusative instead. Personally, I believe more in Hypothesis 2 because it involves fewer assumptions about the history of language contacts in Siberia. This hypothesis is also supported by Gusev (2021: 28, 42). At the same time, I do not claim that Hypothesis 1 is completely impossible — it does not seem realistic with respect to the data we have now.

The analysis provided in this chapter has to be perceived considering a set of limitations. There is a lot of uncertainty when it comes to the description of events and processes that had happened in the past. Ethnographic and linguistic descriptions of indigenous peoples in Siberia started to be made during the process of colonization, and the most fruitful research started only in the Soviet period with the works of Glafira M. Vasilevič, Vera I. Tsintsius, Eugene A. Helimski and others. Respectively, deductions about earlier periods of Siberian history, ethnography and language situation can only be made based on traces of the information we have in the modern world such as archaeological findings, language reconstructions, narratives and genetic analyses. As it was mentioned before, there have been a lot of debates on different aspects that could influence the analysis

under scrutiny such as genealogical structures of families in question, dating of languages formations and divergences and presumable locations of peoples under research. The confrontation of data is most possible when it is based on different kinds of methods that involve different sources: for example, statistical analysis of Oskolskaya (2022) tends to estimate the time of language divergence later than it is determined by linguochronologic analysis of Robbeets et al. (2020). Although I put the sources I used under critique and tried to rely on the recentmost issues, I encountered a number of contradictions, which prevented me from making a certain decision about which scenario to choose. However, I hope that the future research on this topic will provide more arguments in favor of any of the hypotheses.

3.2. NT-derivations in Siberia

Another example of nominal tense-like category that is found in Siberia is adnominal derivations that modify temporal characteristics of nominals they are attached to. Unlike destiative, under their scope fall not only possessive but mostly existential components of entity described by nominals they occur with. To be considered as a NT-derivation, an affix has to fulfill a number of characteristics: 1) it has to be attached to a nominal stem; 2) it has to modify the meaning only of a nominal phrase, not the whole proposition; 3) it has to occur not only on nominals in predicative position. As I describe NT-derivation as a nominal tense-like category rather than a prototypical nominal tense, I did not pay much attention to such parameters as occurrence with a wide range of nominals and inflectional behavior. Several nominal tense markers that are found in various languages of Siberia have been widely discussed in Gusev (2021) as one of the evidences of the Ancient Siberian substrate hypothesis. However, he paid attention mostly to nominal past tense suffixes, while nominal future can also be found in languages of Siberia. In this chapter I am going to present the derivations I found in grammars and comment on the Ancient Siberian substrate hypothesis as the source of these derivations.

3.2.1. Sample

For this part of my research another sample is used. The sample consists of languages situated in Siberia, their relatives outside Siberia and neighbouring languages. The languages of Siberia are represented by 34 languages from nine language families (Chukotko-Kamchatkan, Eskimo-Aleut, Mongolic-Kitan, Nivkh, Tungusic, Turkic, Uralic, Yeniseian and Yukaghir), one language for lowest-level genus, according to Glottolog. On each level the most fully described language was chosen. For example, the following languages (highlighted with bold) were taken from Tungusic language family (see. Figure 2; data taken

from Glottolog). If a language did not have a grammar or, at least, a complete grammar sketch written in English or Russian language, it was not included in the sample, as it happened with, for example, Jurchen.

Figure 2. Languages from Tungusic language family used in the sample for micro-analysis.



The same system was used for 32 languages outside Siberia that have at least one relative located in Siberia. They were taken only from five language families, as Chukotko-Kamchatkan, Nivkh, Yenisean and Yukaghir families do not have languages beyond Siberia. Finally, five languages from neighboring families were also used in the sample: Chinese (Sino-Tibetan), Japanese (Japonic), Korean (Koreanic), Hokkaido Ainu (Ainu) and Russian (Indo-European). The latter is also present in Siberia, however as it spreads out an enormous territory beyond Siberia as well it was ranked among neighboring languages.

Besides the sample, I also used the data described in (Gusev, 2021). That is the way I collected some data about Negidal, Oroch and Ulch that were not included in the sample as well. I also mention Naukan Yupik, because it is described in the same grammar as Central Siberian Yupik (Menovschikov, 1962). In the next chapters I am going to observe each language from the sample on NT-derivations, providing brief overviews of such derivations if they are found.

3.2.2. Nganasan (Uralic)

Leisiö (2014) describes a suffix *-d'əə* which is attached to a wide variety of nominals and forms nominal past tense meaning. The suffix is productive and, according to (Gusev, 2021: 43) can occur with different classes of nouns: people (e. g. 44), body parts (e. g. 45) and other inanimate entities which are often possessed (e. g. 46). However, it cannot be used with natural objects such as ‘stone’, ‘river’ and with time periods as ‘year’ (Leisiö, 2014: 53). The use of nominal past marker with people is described differently in (Leisiö, 2014) and (Gusev, 2021). While the former claims that *-d'əə* cannot be used to denote a deceased person, the latter gives examples where ‘father-NPST’ means ‘deceased father’ and not ‘father that left the family’ (e. g. 47). However, I do not think that the meaning ‘deceased father in the example 47 would be possible without the verb ‘ in the following context.

- (44) *d'esī-d'əə*
 father-NPST
 ‘father that left the family’. (Leisiö, 2014: 53)
- (45) *nomu səə-d'əə*
 hare.GEN heart-NPST
 ‘a heart of a killed hare’. (Leisiö, 2014: 53)
- (46) *bəikuə ŋamsu-d'əə*
 old.man.GEN meat-NPST
 ‘remains of meat that an old man ate and left’. (Leisiö, 2014: 54)
- (47) *d'esī-d'əə-mi manuo d'esī-mi təi-süə*
 father-NPST-1DU former father-1DU be-PST
kaŋkəə kuə-düə
 long.ago die-PST
 ‘We had a father, he is already dead’. (Gusev, 2021: 42)

Such preference in choice of nominals can be explained by defining a similarity between kinship terms, body parts and possessed natural entities — all these meanings are often expressed with possession. Thus, at some point Nganasan NT-derivation lies in between prototypical nominal tense and tense-modified possession, because it does not require a

possessive suffix as does predestinative but noticeably prefers possessive contexts. It is also worth noticing that the suffix participates in the formation of past participles following the verbal past tense marker (e. g. 48).

- (48) *tuj-süə-d'əə*
 come-PST-NPST
 ‘the one that came’. (Leisiö, 2014: 52)

3.2.3. Evenki (Tungusic)

In Evenki both past and future NT-derivations are found. Past NT-derivations are presented as two suffixes that possess not only nominal tense meaning. Furthermore, nominal tense semantics is usually described for them as collateral. The first suffix, *-mī*, is usually described as a pejorative evaluative suffix, however in addition to a disdainful relation of a speaker to an entity it can also describe dysfunctionality, defectiveness and, most important, dilapidation (Gusev, 2021: 44; Bulatova, 2015). In turn, dilapidation implies limited use or complete disuse, even though an entity was in use before, and this semantics fulfills the definition of nominal past tense (e. g. 49).

- (49) *tetə-mī* *lokūča-d'ara-n*
 clothes-NPST hang-PRS-3SG
 ‘Ragged clothes hang. (Bulatova, 2015: 69)

However, Bulatova (2015: 76) mentions that this suffix is not exclusively attached to nominals, it can as well occur with numerals, adverbs and verbs, which makes it transcategorial (as in Example 50). In the last mentioned cases it usually bears only a pejorative meaning. Its position in a word form can also change: sometimes it behaves like an infix and not suffix (e. g. 51).

- (50) *təmatna* *ηene-mī-d'əηē-n*
 tomorrow go-NPST-FUT-3SG
 ‘He/she will go tomorrow (derogatory)’. (Bulatova, 2015: 70)

- (51) *bejūkte-d'e<mī>nē* *mī-čē-Ø*
 hunt-SIM<NPST> get.lost-PST.PTCP-3SG

‘He got lost while hunting (derogatory)’. (Bulatova, 2015: 70)

Another suffix in Evenki which seems to show nominal tense-like semantics is *-rān*. It also has the meaning of dysfunction and disuse, however if *-mī* is mostly used with houses and clothes, *-rān* occurs with roads (e. g. 52).

- (52) *umnā dolbotono ūtlā-čā-n bārkan-mā*
 once at.night set.a.trap-PST-3SG crossbow-ACC
munnukān ūd’a-ran-du-n
 hare footprint-NPST-DAT-3SG

‘Once (he) installed a crossbow on a path, where a hare used to hop’. (Vasilevič, 1936 via Gusev, 2021: 44)

3.2.4. Even (Tungusic)

A suffix *-mījA* that is found in Even is formerly described by Tsintsius (1947) as a pejorative suffix. However, the research of Pakendorf and Krivoschapkina (2014: 294) showed that in Bystraja dialect of Even (Kamchatka peninsula, Bystrinsky district, villages Esso and Anavgaj) the primary meaning of this suffix is ‘old, former, dilapidated’. The fieldwork data (2021) from Bystrinsky district provided examples⁶ of both pejorative (e. g. 53) and nominal tense-like use (e. g. X54).

- (53) *or-mija*
 reindeer-NPST
 ‘not a good reindeer’. (fieldwork, 2021)

- (54) *d’u-mija*
 house-NPST
 ‘an old house’. (fieldwork, 2021)

In Bystraja dialect the suffix *-mījA* occurs also with kinship terms to express that the relationship with this person is over (e. g. 55). Surprisingly, it can even be attached to proper nouns, which is not common at all (e. g. 56).

⁶ I would like to thank my friend and colleague Sasha Nogina for collecting these examples.

- (55) *atikam-mija-wu*
 woman-NPST-POSS.1SG
 ‘my ex-wife’. (Pakendorf & Krivoschapkina, 2014: 294)
- (56) *tan’a-mija*
 T.-NPST
 ‘Tanja, who is not a family member anymore’. (Pakendorf & Krivoschapkina, 2014: 294)

Gusev (2021) claims that *-mIjA* in Even is related to the aforementioned Evenki suffix *-mī*. At the same time, *-mIjA* does not show any transcategorial behavior as it does *-mī* (or, at least, it has not been noticed so far). They both tend to have a derogatory and dysfunctional semantic component, however Evenki *-mī* have not been noticed to cooccur with proper nouns and kinship terms. A curious case for the future research here is to check if occurrence of *-mIjA* with words that refer to people show a derogatory, biased and negative relation of a speaker to them: does *atikam-mija-wu* necessarily mean that a speaker hates their ex-wife and can only refer to her in a disdainful way?

3.2.5. Common Tungusic NT-derivations

One more NT-derivation that is found in Evenki is *-ŋāt* which also has two additional morphophonological variants: *-ŋōt* and *-ŋə̌t*. This time the derivation possesses semantics close to nominal future tense. Nedjalkov (1997) describes its semantics only as ‘material’, and indeed this suffix is mostly used to denote materials for making an entity as in Example 57. However, Bulatova and Grenoble (1999) noticed that it can also be used with kinship terms like in Example 58.

- (57) *kokollo-ŋōt*
 sleeve-NFUT
 ‘material for sleeves’. (Bulatova & Grenoble, 1999: 15)
- (58) *asī-ŋāt*
 wife-NFUT
 ‘future wife’. (Bulatova & Grenoble, 1999: 15)

In Udihe the suffix *-ŋati* can also be used both for material and kinship terms (e. g. 59–60).

- (59) *uŋta-ŋati*
boots-NFUT
‘leather for sewing boots’. (Nikolaeva & Tolskaya, 2001: 150)
- (60) *mamasa-ŋati*
wife-NFUT
‘bride, future wife’. (Nikolaeva & Tolskaya, 2001: 150)

As well as in Evenki and Udihe, Even also have a suffix *-ŋat* which is used to denote a material for an entity (e. g. 61 from Okhotsk dialect). At the same time there is no examples where *-ŋat* occur with kinship terms as it happens in Evenki and Udihe.

- (61) *min* *am-mu* *momi-ŋat* *hulu* *čiki-rid’i*
my father-POSS.1SG boat-NFUT poplar cut-ANT.SG
teŋe-du *emen-ni-n*
thicket-LOC leave-PST-3SG
‘My father, after he cutted down a poplar in order to make a boat, left it in the thicket’. (Tsintsius, 1947: 69)

Finally, a NT-derivation which is present in most of Tungusic languages, namely in Evenki (e. g. 62), Negidal, Oroch, Udihe, Ulch and Orok (Gusev, 2021: 45) is a suffix *-ŋasa/-ŋā* which is used with kinship terms to denote, that a person is no more alive. The meaning ‘dead, deceased’ is a quite common meaning for past nominal tense not only in Tungusic languages, but also in other languages of the world, for example, in Bora (Boran, South America; Thiesen & Weber, 2012) or Creek (Muskogean, North America; Martin, 2011). It is often the only possible nominal tense meaning found in a language. In Udihe it can be attached to a proper noun (e. g. 63).

- (62) *ami-ŋasa*
father-NPST

‘dead father’. (Gusev, 2021: 45)

- (63) *ei* *zugdi-we* *iwana-ŋā* *wō-m*
this house-ACC I.-NPST make.PST-3SG

‘This house was made by the deceased Ivan’. (Nikolaeva & Tolskaya, 2001: 154; also Example 11)

3.2.6. Southern Yukaghir (Yukaghir)

The only case in Southern Yukaghir which can be considered as NT-derivation is prospective. If a nominal is marked with a prospective suffix *-možu*, it can bear a future nominal tense meaning as in example 64.

- (64) *terike-možū*
wife-PROSP
‘bride, future wife’. (Maslova, 2003: 122)

Nominal prospective can also appear with nominalizations in order to form a Nominal Prospective construction which denotes anything that entails the situation described by the clause (e. g. 65). This fact shows that the semantics of Nominal prospective cannot be explained as simply a nominal future tense, because it also includes entailments of the situation and can be analyzed more like a nominal modality (Maslova, 2004).

- (65) *n’e-qanide* *qon-ōl-možū* *el-lejdī-t*
NEG-where:DIR go-NMZ-PROSP NEG-know-SS:IPFV
tā *mēmē-n’e* *abudā-l’el*
there bear-COM lie-INFR.3SG

‘Since she did not know where to go, she lay down together with the bear’.
(Maslova, 2003: 155)

A cognate of this marker is also found in Northern Yukaghir, however it did not grammaticalize to the same extent as in Southern Yukaghir and, respectively, behaves syntactically like a separate word (Maslova, 2004: 219).

It is also worth noting that prospective marker is also present in the verbal systems of both Southern and Northern Yukaghir, however, as it is mentioned in Maslova (2004: 219), verbal and nominal prospective do not structurally correspond with each other, even though they are etymologically related.

3.2.7. *Chukchi (Chukotko-Kamchatkan)*

NT-derivation system is presented in Chukchi with one suffix *-lqəl/-ləqəl*, which is mostly used to derive nominals with meaning ‘material for something’ as in example 66. It is also a common way to derive words for seeds of different plants (e. g. 67). Besides, *-lqəl* can also occur with animated nouns where it means someone that is going to receive a new status (Skorik, 1961: 314). It can be used not only with kinship terms (e. g. 68), but also with work positions (e. g. 69).

(66) *jara-lqəl*

house-NFUT

‘material to make a house’. (Skorik, 1961: 314)

(67) *wʔejə-lqəl*

grass-NFUT

‘seeds of grass’. (Skorik, 1961: 314)

(68) *ɲewʔen-ləqəl*

wife-NFUT

‘bride, future wife’. (Skorik, 1961: 315, also Example 3)

(69) *erme-lqəl*

boss-NFUT

‘the one, who is destined to be the boss’. (Skorik, 1961: 314)

3.2.8. *Central Siberian Yupik (Eskimo-Aleut)*

Central Siberian Yupik (namely Chaplino dialect) has two morphemes that could be analyzed as NT-derivation: one for nominal past tense, *-kuwiŋa(q)*, and one for nominal future tense, *-ka(q)/-kaχqa(q)*. Menovschikov (1962) describes the meaning of the suffix *-kuwiŋa(q)* as ‘something that lost its former qualities and functions, but still has some

common properties’. This suffix can be used both with inanimate (e. g. 70) and animate entities, where for the latter it does not mean ‘the dead one’ but only ‘the one that lost its functions (e. g. 71).’ Also, according to Menovschikov (1962: 101), if this suffix cooccurs with possessive markers in a word form, it can be used to denote both the loss of its function and its possession (e. g. 72).

(70) *qikmi-quwiṇaq*

dog-NPST

‘remains of a dog, its skeleton’. (Menovschikov, 1962: 100)

(71) *predsedatelə-kuwiṇaq*

chairperson-NPST

‘a former chairperson’.

#‘a dead chairperson’. (Menovschikov, 1962: 100)

(72) *ujka-kuwiṇa-qa*

stone-NPST-POSS.1SG

‘a stone, that used to be mine, but now lost, stolen or broken’. (Menovschikov, 1962: 101)

A nominal future tense suffix *-ka(q)/-kaχqa(q)* can also be used both with inanimate and animate nouns: with former it derives nouns that mean ‘material for something’ (e. g. 73), while with the latter it is used for some kinship terms (e. g. 74) and work positions (e. g. 75).

(73) *tafsi-kaχqaq*

belt-NFUT

‘material for belt’. (Menovschikov, 1962: 94)

(74) *iknəχ-qaq*

son-NFUT

‘stepson, the one destined to be a son’. (Menovschikov, 1962: 94)

- (75) *ikaiorti-ka-qa*
 assistant-NFUT-POSS.1SG
 ‘my future assistant’. (Hinz, 1955 via Menovschikov, 1962: 95; also Example 43)

Menovschikov mentions that the suffix *-kaq/-kaχqaq* is diachronically connected to the suffix *-jaχqaq* of future resultative participles with obligation component, which can be divided into two grammatical categories: a modal suffix *-jaχ* which gives an obligation component and *-kaq* which denotes future acquisition of a property. However, it is relevant only diachronically.

3.2.9. Naukan Yupik (Eskimo-Aleut)

In Naukan Yupik the same suffix *-ka(q)/-qa(q)* is used for nominal future tense derivation as it is found in Central Siberian Yupik. The functions remain the same, although there are no examples of animate entities marked with this suffix (Menovschikov, 1975; e. g. 76).

- (76) *anjaχ-qaq*
 kayak-NFUT
 ‘material for kayak’. (Menovschikov, 1975: 47)

Unlike Central Siberian Yupik, in Naukan Yupik *-kuwiŋa(q)* hardly can be analyzed as nominal past tense. Instead it bears the partitive meaning; namely a part, fragment or remains of an object (Menovschikov, 1975: 57). In some contexts it still can denote partial remains of an entity which used to be intact and in use as in example 77.

- (77) *oša-quwiŋaq*
 house-PART2
 ‘a single remain of a house’. (Menovschikov, 1962: 101)

Instead of *-kuwiŋa(q)*, Naukan Yupik has its own suffix which is not attested in Central Siberian Yupik to express a formerly functioning object or an object that used to have its salient properties but lost them — *-χko(q)* (Menovschikov, 1962: 101; Menovschikov, 1975: 57). Examples 78–79 present the difference in semantics of *-kuwiŋaq* and *-χkoq* in Naukan Yupik.

- (78) *unaχse-quwiŋaq*
 wood-PART2
 ‘a piece of wood’. (Menovschikov, 1962: 101)

- (79) *unaχse-χkoq*
 wood-NPST
 ‘remains of wood, what used to be wood’. (Menovschikov, 1962: 101)

3.2.10. *Alutor (Chukotko-Kamchatkan) and Old Sirenik (Eskimo-Aleut)*

In Alutor and Old Sirenik there is no marker which could be undoubtedly associated with nominal tense, however they both have a special derivation used to form nominals with material meaning. I added Alutor and Old Sirenik there because in other aforementioned languages such as Chukchi and Central Siberian Yupik the suffixes that express more prototypical nominal tense meanings, namely kinship terms for future relatives, can also be used to denote materials. Thus, I consider that in some languages the semantics of material can be a particular case of nominal tense behavior. However, it does not imply the opposite, that every material suffix is necessarily a particular case of nominal tense, so I do not state that Alutor and Old Sirenik have the cases of nominal tense. It is more safe to consider material derivations as examples of a category which can be adjacent to nominal tense typologically. In Alutor (e. g. 80) the material suffix is a cognate for Chukchi nominal future derivation.

- (80) *wala-lqəl*
 knife-MAT
 ‘material for knife’. (Nagayama, 2003: 22)

At the same time, according to Menovschikov (1964), an Old Sirenik material suffix (e. g. 81) does not show an obvious connection with suffixes in Naukan Yupik and Central Siberian Yupik. However, he points out semantic correspondence between Old Sirenik and Central Siberian Yupik suffixes.

- (81) *anjəʁ-nəχ*
 kayak-MAT
 ‘material for kayak’. (Menovschikov, 1964: 34)

3.2.11. *Genera and languages in Siberia without NT-derivations*

Some language families that are completely or partially present in Siberia lack NT-derivations in all their languages. Such language families are Turkic, Mongolic-Kitan, Yeniseian and Nivkh. Khantyic branch of Uralic, Kamas-Selkup, and Mator-Taigi-Karagas do not have NT-derivations either. Neither does Russian from Indo-European language family.

Besides languages of the same affinity, neighboring but not related language families should be also explored to check whether a feature is present or not. From neighboring languages only Hokkaido Ainu has an example of NT-derivation: nominal past tense suffix -*po* used only with animate nouns to denote deceased relatives (e. g. 82; Tamura, 2000).

- (82) *aki-hi-po*
 younger.brother-AFF-NPST
 ‘(his) late younger brother’. (Tamura, 2000: 221)

In Sino-Tibetan, Japonic and Koreanic no NT-derivations or adjacent categories are found.

3.2.12. *Related languages beyond Siberia*

In order to find out if a language feature is specific for a particular area, the languages within the area should be compared with their relatives beyond (Haspelmath, 2008). The non-occurrence of the feature in question outside the determined area shows that the feature is peculiar for it. For this research only the following families are relevant: Uralic, Tungusic and Eskimo-Aleut. Yukaghir and Chukotko-Kamchatkan language families do not have languages beyond Siberia.

All genera of Eskimo-Aleut languages have a variety of NT-derivations. The most remarkable case is in Kallaalisut, where I have found the largest number of nominal tense derivations in the world: one nominal past tense suffix -*ku(q)* (e. g. 83), one nominal future tense suffix -*ssa(q)* which is a cognate to verbal future tense suffix -*ssa* (e. g. 84) and can denote both material (e. g. 85) and future possession (e. g. 86), one suffix used to denote past

possession *-gigaluaq* (e. g. 87) and, what is the most surprising, a unique nominal present tense suffix *-(r)piaq* (e. g. 88).

- (83) *kami-ku-q*
boat-NPST-ABS
‘remains of a boat’. (Fortescue, 1984: 317)
- (84) *tuqu-ssa-atit*
die-FUT-2SG.SUBJ.IND
‘You will die’. (Fortescue, 1984: 274)
- (85) *qaja-ssa*
kayak-NFUT
‘a future kayak, material to make kayak’. (Fortescue, 1984: 318)
- (86) *tunissuti-ssa-q niviarsia-mut pisiara-ara*
gift-NFUT-ABS girl-ALL buy-1SG.SUBJ/3SG.OBJ.IND
‘I bought a gift for a girl’. (Fortescue 1984: 213; also Examples 2, 42)
- (87) *illu-gigalua-rput*
house-NPST2-POSS.1PL
‘our previous house’. (Fortescue 1984: 317)
- (88) *nappaati-rpiaq*
illness-NPRS
‘an actual illness’⁷. (Fortescue 1984: 318)

Gusev (2021) mentions one more Greenlandic suffix *-Vḡativaq* in Tunumiisiut which has nominal past meaning and is used with animate entities to denote a deceased person (e. g. 89) or a person that is no more related to another participant.

⁷ A native speaker of Kalaallisut in personal communication via Tinder confirmed that the suffix characterizes the time and not credibility or any other property that could be described with English words ‘real, actual’ as it is written in the translation given by Fortesque (1984: 213).

- (89) *unaquti-ijativa-a*
 friend-NPST-POSS.3SG
 ‘his former or late friend’. (Mennecier 1994: 368–370 via Gusev, 2021: 46)

In Seward Alaska Inupiatun a suffix *-aluaq* has the meaning ‘former’ and occurs with animate entities such as professions and kinship terms (e. g. 90; Lanz, 2010: 72; Seiler, 2012: 243).⁸

- (90) *taamna aṇun uig-aluaḱ-a*
 DEM man husband-NPST-ABS.POSS.1SG
 ‘This man is my former husband’. (Seiler, 2012: 243)

Eastern Canadian Inuktitut also has a nominal past tense suffix in its derivational paradigm. *-viniq* attaches to nominals in order to form the meaning ‘something, that used to be something’, ‘former’ (e. g. 91). The suffix attaches to a wide variety of nominals. According to Beach (2012: 38) can only be used with nominal stems, however it can as well attach to non-finite verbal forms that show nominal behavior (such as gerund).

- (91) *tuttu-vinir-mil-lu palaugaar-mil-lu*
 caribou-former-SEC.SG-CONN bannack-SEC.SG-CONN
niri-guma-ju-nga
 eat-want-INDI-1SG
 ‘I want to eat caribou and bannack’. (Beach, 2012: 383)

Gusev (2021) also mentions the data from Central Alaskan Yupik and describes two suffixes that denote nominal past tense: *-lŷ* ‘former’ (e. g. 92) and *-niŷut* ‘deceased’ (e. g. 93).

- (92) *ui-l-qa*
 husband-NPST-POSS.1SG

⁸ In Seward Alaska Inupiatun one more suffix *-taq* is found. However, its homonymic suffix is analyzed as a verbalizer, and in addition to ‘former X’ it bears meaning ‘originated from X’. I am not sure if this suffix can be considered as an example of NT-derivation without in-depth knowledge of Seward Alaska Inupiatun grammar, therefore I am not going to analyze this suffix there in more detail.

‘my former husband (dead or alive, but divorced or left)’. (Miyaoka, 2012: 664)

- (93) *aipa-irut-ka*
spouse-NPST-ABS.POSS.1SG
‘my late spouse’. (Miyaoka, 2012: 665)

Besides nominal past tense, I found in Central Alaskan Yupik an example of a derivation with future meaning *-kaq* (e. g. 94), which can denote material, kinship terms, etc.

- (94) *angyar-kaq*
boat-NFUT
‘material for a boat’. (Miyaoka, 2012:)

Thus, Eskimo-Aleut languages show a variety of derivations which are semantically adjacent to the definition of nominal tense, so the occurrence of such derivations in Eskimo-Aleut languages of Siberia is not unexpected. A different situation happens with Tungusic and Uralic. In Manchu, which is a Tungusic language located outside Siberia, no NT-derivations are found. In Uralic languages the only example of similar category is an unproductive derivational suffix *-aš/-š* in Eastern (Meadow) Mari which has material meaning along with purposive meaning (e. g. 95).

- (95) *vočk-aš*
tub-MAT
‘material for a tub’. (Pengitov et al., 1961: 76)

All in all, if comparing Uralic, Tungusic and Eskimo-Aleut languages inside and outside Siberia, it can be observed that family similarity is more noticeable rather than areal similarity: Eskimo-Aleut tend to have NT-derivations both in and beyond Siberia, while Uralic in turn are not likely to express nominal tense meaning derivationally (only Nganasan in Siberia and material-purposive suffix in Eastern Mari). At the same time, it is difficult to claim anything for Tungusic, because even though Tungusic languages in Siberia tend to have NT-derivations, Manchu is the only Tungusic language outside Siberia, and it can be imprudent to consider areal behavior of NT-derivations in Tungusic based on only one language outside Siberia. However, the widest system of derivations with nominal tense-like

semantics is found in Northern Tungusic, namely in Evenki and Even, while its number is being reduced to zero moving southwards to Manchu. This tendency can imply that the further north a Tungusic language is located, the more likely it is to possess NT-derivations in its derivational inventory.

3.2.13. *The Ancient Siberian substrate hypothesis*

The hypothesis about the existence of Ancient Siberian substrate language is proposed and widely discussed in (Gusev, 2021: 50–53). The idea is based on the occurrence of a set of typologically similar features in different language families in Siberia, especially in ones that appeared in this area in ancient times (e. g. Yukaghir, Nivkh, Chukotko-Kamchatkan, Eskimo-Aleut, etc.). The emergence of these features cannot be described in terms of direct language contacts, because no evidence of such contacts is found. Thereby, the only option how non-related languages that did not interact with each other could apply similar language features is that they all underwent contacts with an unknown language which is code-named “North Siberian substrate language”. The language in question, according to Gusev (2021: 51) was proposedly related to Eskimo-Aleut languages, and presumably migrated to Siberia with one of the populational waves that moved in the direction from south and west to north and east towards the Bering strait. On a par with NT-derivations (which Gusev designates as anterior nominal form) the following features are proposed as the result of substrate influence: interrogative mood suffixes, intracitics and colexification of concepts ‘real’ and ‘our, local’.

According to the information about NT-derivations in Siberia I described in this chapter, the following observations regarding substrate influence can be made. First of all, none of these suffixes developed from the same proto-form, so only pattern-borrowing is possible here. However, even the patterns are built differently: the set of meanings that could be expressed by NT-derivations varies from language to language (see. Table 11).

Table 11. NT-derivations in Siberia

Language	<i>Nominal past tense</i>				<i>Nominal future tense</i>			
	<i>dead</i>	<i>former status</i>	<i>remains, disuse</i>	<i>possession</i>	<i>kinship terms</i>	<i>occupation</i>	<i>material</i>	<i>seeds</i>
Nganasan	???	-d’əə	-d’əə	-d’əə	NA	NA	NA	NA
Evenki	-ŋasa	NA	-mī -rān	NA	-ŋāt	NA	-ŋāt	NA

Even	NA	<i>-mIjA</i>	<i>-mIjA</i>	NA	NA	NA	<i>-ŋat</i>	NA
Negidal	<i>-ŋasa</i>	NA	NA	NA	NA	NA	NA	NA
Udihe	<i>-ŋā</i>	NA	NA	NA	<i>-ŋati</i>	NA	<i>-ŋati</i>	NA
Oroch	<i>-ŋasa</i>	NA	NA	NA	NA	NA	NA	NA
Orok	<i>-ŋasa</i>	NA	NA	NA	NA	NA	NA	NA
Ulch	<i>-ŋasa</i>	NA	NA	NA	NA	NA	NA	NA
Southern Yukaghir	NA	NA	NA	NA	<i>-možū</i>	NA	NA	NA
Chukchi	NA	NA	NA	NA	<i>-lqəl</i>	<i>-lqəl</i>	<i>-lqəl</i>	<i>-lqəl</i>
Alutor	NA	NA	NA	NA	NA	NA	<i>-lqəl</i>	NA
Central Siberian Yupik	NA	<i>-kuwiŋa(q)</i>	<i>-kuwiŋa(q)</i>	<i>-kuwiŋa(q)</i>	<i>-ka(q)</i>	<i>-ka(q)</i>	<i>-ka(q)</i>	NA
Naukan Yupik	NA	NA	<i>-χko(q)</i> <i>-kuwiŋa(q)</i>	NA	NA	NA	<i>-ka(q)</i>	NA
Old Sirenik	NA	NA	NA	NA	NA	NA	<i>-nəχ</i>	NA

Then, looking closer to the possible meanings, some tendencies can be noticed. Similar behavior demonstrate Chukchi suffix *-lqəl* and Central Siberian Yupik suffix *-ka(q)*, the only difference is that in Chukchi *-lqəl* can express a quite specific meaning ‘seed of a plant’. Evenki and Udihe suffixes *-ŋāt* and *-ŋati* also function in a similar way, however there is no data about whether they can denote designated work position or not as it do *-ka(q)* and *-lqəl*. Also, Nganasan suffix *-d’əə* can be used in the same situations as *-kuwiŋa(q)* in Central Siberian Yupik, while the only difference of *-mIjA* in Even is that it is not found in contexts where it denotes former possession. The most frequent use of nominal past tense is disused objects or their remains, whilst for nominal future tense it is kinship terms and material.

The case of Chukchi *-lqəl* and Central Siberian Yupik *-ka(q)* can possibly have contact preconditions directly between Chukotko-Kamchatkan and Eskimo-Aleut languages. The intensive contacts between Chukchi and Central Siberian Yupik were described in (Comrie, 1996); that said, Chukchi language had a greater prestige and, respectively, influenced Central Siberian Yupik more than vice versa. Menovschikov (1967; 269–272) notices that Central Siberian Yupik mostly acquired particles and adverbs, while only a small

number of nominals and verbs was borrowed. He mentions nothing about the acquisition of separate morphemes or, a fortiori, their pattern-borrowing. At the same time, non-Siberian Eskimo-Aleut languages such as Kalaallisut also have nominal future tense derivations, whereas their contacts with Chukchi seem almost impossible. The opposite direction of borrowing, that is from Central Siberian Yupik to Chukchi, is as well doubtful, because Alutor have the same derivation *-lqəl* as in Chukchi, at it would be logical to propose that *-lqəl* developed from the same proto-form both in Chukchi and Alutor.

The case of Nganasan *-d'əə* and Central Siberian Yupik *-kuwiŋa(q)* is more tricky. The areas where Nganasan and Central Siberian Yupik were (and still are) spoken are considerably remote from each other. I could not find any evidence of Nganasan and Central Siberian Yupik contacts either. Neither Gusev believes in the possibility of such contacts. In this case the Ancient Siberian substrate hypothesis would probably be the only option of how the occurrence of NT-derivations in Nganasan and Central Siberian Yupik can be explained considering these features not to evolve randomly. The contacts of Central Siberian Yupik with Tungusic languages have not been noticed either, however Janhunen (2013: 46) mentions contacts between Even and Chukotko-Kamchatkan languages. At the same time, the cognates of nominal future suffix *-ŋat* are found not only in Even, but also in Evenki and Udihe, which gives the possibility to two scenario: either the suffix developed independently on a proto-level, or was influenced by a substrate language that both had contacts with Chukotko-Kamchatkan and Tungusic languages. The question of development of *-d'əə* in Nganasan and *-mī/-mIjA* in Tungusic is connected with the question of destinative spread described in Chapter 3.1. Finally, the lack of NT-derivations in Sakha works perfectly with Gusev's hypothesis: as he mentioned (Gusev, 2021: 52), Sakha migrated to Siberia considerably later, so the hypothetical substrate language had already become extinct by that time.

While working with the statistical part of my research, I noticed that in other macro-areas nominal tense-like suffixes follow some semantic and structural patterns, which can as a result be considered as more frequent, whilst the others occur noticeably less often. For example, the meaning 'dead, deceased' is expressed quite often, especially as the only nominal tense meaning denoted by a suffix. The scenarios where nominal tense modifies family status are also frequent, however in most examples I could find it is used with possessive markers, which suggests that nominal tense markers there have influence on the possessive component of semantics and not on family status per se. Thus, Example 96 from Mamaindé (Nambiquaran, South America) does not necessarily mean that the chief

completed his career after the speaker resigned, and, respectively, it reminds to a greater extent Samoyedic and Tungusic destinatives (e. g. 96) rather than a destined work position as in Chukchi (e. g. 69) or a destined new marital status as in Southern Yukaghir (e. g. 64). The latter case of future profession and family status which represent a clear case of status modification without the modification of possession is found predominantly in Siberia, which makes it a presumable consequence of substrate effect.

- (96) *ta-walek^han-leʔi-tu*
 POSS.1-chief-NPST-FNS
 ‘my past chief’. (Ebernard, 2009: 361)

Besides similar semantics expressed by aforementioned suffixes, similar behavior can also be taken into consideration, especially in analysis of pattern-borrowings. Even though the processes of grammaticalization are difficult to trace using grammars, some similar patterns can be observed anyway. The transcategoriality of Southern Yukaghir nominal future marker *-možū* and Evenki nominal past *-mī* can seem promising from the contact point of view, however the difference between their semantic and structure is still huge.

All in all, even though, according to statistical evidence in Chapter 2 and Gusev’s propositions about substrate origin of NT-derivations, nominal tense-like categories are found surprisingly often in Siberia, the closer look on particular cases show the considerable difference in semantics and structure of the categories in question. Furthermore, as Gusev mentions (2021: 51) morphological richness of Eskimo-Aleutic languages lets them have a lot of adjacent features in non-related languages not only in Siberia but worldwide, which makes the idea of Eskimo-Aleut substrate language a bit less groundbreaking. I would also add here that all languages of Siberia in question tend to have wide morphological systems with a big variety of nominal derivations, which gives them the possibility to express morphologically what is typologically often signified with distinct words. Moreover, the cases of transcategorial suffixes, as well as other transcategorial behavior (e. g. tense marking on nouns in predicative position in Samoyedic), are relatively often found in Siberia, so the possibility of expressing nominal tense semantics with morphology can be a consequence of a vague difference between nominals and verbs, which turned out into a common pattern of grammaticalization. Therefore, I would consider that NT-derivations can be a testimony for an Ancient Siberian substrate hypothesis, especially for some particular cases, however I

would not trust this hypothesis undoubtedly and search for other explanations or more demonstrative examples instead.

4. Conclusion

In this research I provide an examination of nominal tense as an areal feature giving special attention to Siberia. First of all, the significance of presence of nominal tense-like categories in Siberia in comparison to other macro-areas was proven statistically, confirming a number of formerly proposed assumptions about areal clustering of such a specific language feature. However, Fisher's exact test is quite simple and general. It is not determined to analyze complex cases of areal influence. For a more precise analysis other methods such as the Family Bias Method which formerly showed its eligibility in case of other features (Bickel, 2015) are needed.

The closer scrutiny on two cases, namely on destinitive in Tungusic and Samoyedic and NT-derivations in various genera in Siberia, showed that there are contact preconditions that could influence the spread of features in question onto languages of Siberia. At the same time, the details of the contacts remain unclear so far. The deeper analysis of contacts between Tungusic and Samoyedic peoples confirmed that they happened relatively recently or, more exactly, between the 17th and early 20th century AD (± 2 centuries before the designated period). The proposed place where the contacts in question happened is determined on the border of modern Turukhan, Taymyr and Evenki districts of Krasnoyarsk krai (former Mangazeya uezd). If any of the Hypotheses 1 and 2 based on direct contacts between Tungusic and Samoyedic peoples is correct, the spread of destinitive happened as a result of these contacts. However, a set of problems such as the occurrence of indefinite accusative instead of destinitive in all Evenki dialects as well as in Solon, Negidal and Orochen, and impossibility to reconstruct a single proto-form for destinitive case markers in Tungusic gives rise to the possibility of parallel borrowing of destinitive from a third unknown language. So far it is impossible to undoubtedly agree on which hypothesis to accept, so future research in this field is expected. I would pinpoint the main topics for the further research on destinitive as an areal feature: 1) A more precise reconstruction of destinitive case and indefinite accusative case markers in all Tungusic languages; 2) The analysis of indefinite accusative in Evenki dialects comparing its functions to destinitive; 3) Statistical prediction of Samoyedic genealogy with respect to the time of divergence (as in Oskolskaya et al., 2022 for Tungusic).

The research on NT-derivations added a number of languages to those described by Gusev (2021) as possible cases of consequences of substrate influence. Although the evidence in support of the Ancient Siberian substrate hypothesis, in my opinion, is not irrefutable so far, some patterns that are typologically infrequent are found in Siberia. Such a pattern is, for example, the possibility to modify the semantic component of status without modifying the possessive component. Some other patterns in this area can also be described via direct contacts, as in the case of Chukotko-Kamchatkan and Eskimo-Aleut languages. As soon as the Ancient Substrate hypothesis is not confirmed, we cannot rely on it as the only explanation of frequent occurrence of nominal tense-like categories in Siberia. Here I would like to propose some directions of future research on NT-derivations in Siberia and the Ancient Siberian substrate hypothesis generally: 1) A search for more linguistic and non-linguistic arguments in support of the substrate hypothesis; 2) Finding the correlation between wide nominal morphology and probability of occurrence of nominal tense-like categories; 3) A search for the connection between vague difference between nominal and verbal stems and probability of occurrence of nominal tense-like categories; 4) Wider research on direct language contacts which could determine the occurrence of specific features that were formerly proposed as a result of substrate influence; 5) The micro-analysis of NT-derivations on an extended sample which includes all languages of Siberia that have at least a brief description of derivational system of nominals in order to receive a complete picture of how NT-derivations vary in Siberia and how they semantically and structurally differentiate from typologically frequent patterns of nominal tense-like categories.

This study could potentially be a starting point for further analyses of nominal tense as an areal feature in other macro-areas such as North America and particular linguistic micro-areas in South America where nominal tense is also frequent. Also, the current research can also play its part in a complex and multidisciplinary research of Siberia and provide one more evidence in favor of postulating a new linguistic area of Siberia.

Appendices

The data I used is contained in the GitHub repository which can be found [there](#). The Excel file "Sample" contains two samples (Worldwide and Siberia) with the values I used for macro- and micro analysis. The .R file "Nominal Tense Baklanov" contains the R code I used for Fisher's exact test in my macro-analysis.

Abbreviations

1	1st person	M	masculine gender
2	2nd person	MAT	derivation ‘material’
3	3rd person	NFUT	nominal future tense
ABL	ablative case	NMZ	nominalization
ABS	absolutive case	NOM	nominative case
ACC	accusative case	NPRS	nominal present tense
ACCIN	indefinite accusative	NPST	nominal past tense
AFF	kinship term suffix	NPST2	past possession (Kalaallisut)
AL	alienable possession	OBJ	direct object
ALL	allative case	OBL	oblique stem suffix
ANT	anterior converb	PART1	partitive case
ART	article	PART2	partitive derivation
CAUS	causative	PL	plural number
CLT	clitic	POSS	possession
COM	comitative	PRED	predestinative
CONN	connector	PROG	progressive aspect
DAT	dative case	PROSP	prospective
DECL	declarative	PRS	present tense
DIM	diminutive	PST	past tense
DST	destinative case	PTCP	participle
DU	dual number	PURP	purposive converb
FNS	final nominal suffix	REFL	reflexive
FUT	future tense	SG	singular number
GEN	genitive case	SEC	secondary case
IMP	imperative mood	SIM	similative converb
INCH	inchoative aspect	SS	same subject
INDI	indicative mood	SUBJ	subject indexation

INF	infinitive	TAME	tense/aspect/mood/evidentiality
INFR	inferential evidential	TOP	topic
LAT	lative case	TRA	translative case
LOC	locative case		

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