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Evaluating parameters of structural analysis in indigenous Siberian singing

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Introduction

The main orientation of this text concerns the general methodological problem of assessing one's analytical apparatus as regards the data to be analysed, the emphasis here being on my own experiences with the structural analysis of indigenous Siberian singing. To what extent is it possible to use European premises, conceptualisations and analytic procedures in order to reach fruitful conclusions about non-European or tribal music materials? If we stick to the convenient methodologies and premises, what could be passable compromises and what kind of consequences will they have?

In my work, especially on the Nenets musical culture and especially on Nenets singing style, the theoretical background I adopted during the 1990's (Niemi 1998) has connections with generative approaches to the grammar of language, either in the field of (Chomskyan) linguistics or in musicology (Ruwet 1987). According to this premise, I deemed it possible to gain a structural understanding of a musical style, assuming that there were consistent principles available for identifying the parameters subjected to structural analysis and that it was possible to justify the conclusions of a structural analysis with empirical evidence

(i. e. sound recordings). Furthermore, this empirical evidence had to be reliably and explicably locked into a form consisting of surface and deep level forms. This structural point of departure was revealed in an encompassing form in the stichic studies by Péter Hajdú (1978) and Eugen Helinski (1989). Giving a thorough account of the deep and surface level structures of the Nenets (and in general North Samoyedic) forms of stichic or metrical language, the analytic field was left open for testing and examining the various forms of local realisation of these principles in real, recorded song data. I was able to draw quantitative conclusions on larger song materials and to arrive at a general explanation for the realisation of the stichic principles governing the realisation of Nenets songs regardless of their dialectal area. I was even able to pinpoint some structural stylistic features peculiar to certain geographic areas.

Thus, in such an undertaking, the central theoretical issue is the selection of relevant parameters for the structural analysis. In the case of northern Samoyed unaccompanied solo song with full, semantic song text, the relevance of the analytical parameters can be grounded in the fact that the very song text is undisputedly arranged in a stichic, metrical and thus predictable form. Furthermore, the fact that on a structural level, the song (performance) consists of a conscious (albeit natural, from the point of view of the performer) interplay between language and melody, as language is transformed into a metrical form in order to be performed to the melody of the song. Thus, the structural explanation is reached, when both the metrical principles of the song text and the melodic formation are accounted for.

This task becomes more tedious – and interesting – when we proceed to a closer look at the possibilities of identifying and characterising the metrical and melodic forms of a song. I subscribe to the practical view that the meter of a song is about accentuation and operates at both a deep and surface level and that both the song text and the melody are structured by their metrical patterns, the basic structures of which may be consistent with each other, but not necessarily. With the concept of a deep level we can characterise the principles of the

patterning of accentuation. The more a song style is governed by a full semantic song text, the easier is the argumentation about the interaction of the linguistic song text with the metrical patterns of the melody, because the metrical characteristics of semantic language forms may contain more discernible metrical implications than a song text with no straightforward linguistic semantic (i. e. the so-called euphonic, asemantic, synsemantic or even “non-sense” song syllables¹). This background also has theoretical connections with the musicological work of Eduard Alekseev (1976; 1986), Urve Lippus (1995), but also our research group of “Eurasian Song” (EULA, funded by the Academy of Finland, 2002–2004). During our research, new thoughts have emerged regarding musical structure: first of all the ontology of melodic modalities and the manifestation of musical time.

The methodological background is governed by two necessary preconditions. First, by the conditions for the existence of traditions on the one hand and second, by the accessibility of the information about those traditions on the other. The condition for the existence of a tradition is a factual precondition, in the sense that in the vast area of northern indigenous musical traditions some local traditions have survived quite well to the third millennium, whereas others show unfortunate signs of waning. If a tradition is alive, it means that there are informants, masters, guides, and connoisseurs available, to whom to turn for help. Waning or extinct traditions are more likely to become objects of interpretative, retrospective or reconstructive research strategies. Among the indigenous peoples of western Siberia this means, for example, that there are ample opportunities for conducting fieldwork among the Nenetses, whereas the exponents of Selkup folklore or language have become tragically rare.

1. All these are somewhat awkward ways to describe the word forms of a song text without a straightforward semantic reference. I consider “euphonic” a passable choice, as it is associated with an outsider’s interpretation that the use of these word forms in a song just seem to let linguistic utterances enhance the singing. To call them “asemantic” would be to maintain that the syllables used have no meaning at all, “synsemantic” is a way to give it up and say that the meaning is “open” or “general”; “secrémic” is possible, if the outsider has the insider’s knowledge about secret or forgotten meanings. Calling this kind of song text “non-sense” would be merely pejorative.

The problem of the accessibility of the information about a tradition has more to do with the design of a responsible research strategy: it has to be thoroughly negotiated with the representatives of a local culture on what conditions it is possible to retrieve information about their culture. A communication system, as for example a totality of a song culture, may consist of sections freely distributable and communicable to outsiders, but also of sections of internal knowledge which it is deemed inappropriate to discuss with outsiders of a culture. In western Siberia, for example, the institution of an individual song is a very demanding object for the outsider to research, because of the subtle network of individual, intimate, rumour-like, biased, truthful etc. knowledge and opinions, the revelation of which may have consequences for the representatives of the local societies. So far I have succeeded in studying the traditions of the individual songs among past generations. Thus, for example, working with the Forest Nenets it proved advisable not to distribute or discuss individual song repertoires, which contain information about individuals living in the present, whereas songs and deeds about people having lived two generations before our times usually lose most of their socially current meaning and thus become more amenable to discussion.

So far, my research process has entailed alternating between the fieldwork phase and the so-called laboratory phase. The present song examples are from my last trip to the Pur river Forest Nenets in September 2003. During this trip my aim was to record a maximum number of individual songs, together with the necessary genealogical information in order to draw songmaps of the individual songs – with the mentioned premises. The present Forest Nenets examples are a part of my wider, ongoing research on the singing style of the northern Samoyeds and especially the singing styles of various groups of the Nenets. During the course of this work, new fieldwork experiences have shed light on the mysteries of previous experiences, but, what may be even more important, constantly raised new unsolved problems. One actual result from this fieldwork experience has been my latest shift of research interest in the direction of studying the structural identity of

individual songs in relation to the network of song repertoires. What is the essential character of an individual song? Structure or meaning? If structure, how can we be sure that we are analysing relevant structural parameters? If meaning, how can we be sure that we have asked the relevant questions and furthermore, what are the possible borders of freely communicable and secret, exclusive information?

My position as a researcher is connected with this two-phase research process. On the one hand I have been able to do short, intensive fieldwork periods with different singers and masters of folklore and on the other I have spent more time analysing the fieldwork data at home. In general, for an average Finn, the possibilities of conducting long-term fieldwork in Russia seems to have been an almost insurmountable obstacle. Since the extensive work of the Finnish linguists at the beginning of the 20th century, no similar work has been possible. In a sense, I have compensated this lack of extensive fieldwork experience with the method of indirect learning of the research material. As this is a supplementary research strategy, where the learning process is based on my cumulative comprehension of the traditions studied, and not on constant dialogue with the tradition-bearers, I do not claim to have acquired a truly bicultural ability in learning the song traditions of the northern peoples. However, my dialogue has continued with my research partners outside the fieldwork periods in the form of other communication, including correspondence by letter, telephone and by visits of my partners in Finland.

These conditions have characterised my method of testing my learning process. I have been able, however, to adjust and corroborate my laboratory phase results with additional fieldwork. This dialogue seems to have worked well so far, for example with the analysis of the individual songs in the social network of the Tundra Nenetses (Niemi & Lapsui 2004), as well as with the Forest Nenetses (forthcoming).

The problem of the parameters

Thus, the theoretical perspective in my studies with the northern Samoyeds centres on understanding the structures of the songs at the level of the melody and the song text. For this, some fresh views for choosing meaningful parameters for the metrical processes of the melody and the text have been proposed, rephrasing the conventional conceptual pair of divisive and additive musical structures (see Niemi & Jouste 2003). Most importantly, this discussion is associated with the wider context of the question of the fundamental characteristics of a sung expression. This was one of the theoretical issues I already proposed in my doctoral dissertation (Niemi 1998) and as such it continues the discussion of identifying the structural forms of a musical expression dating back to the history of comparative musicology. While the discussion about divisivity and additivity in earlier ethnomusicology (Sachs 1953, Hood 1971) centred on European forms of even and uneven meters, in our rephrasing we deemed it more useful to apply this conceptualisation to focus on the easily identifiable and measurable, discrete structural elements of a musical expression compared to those continuous elements of a musical structure, the identification and measurement of which turns out to be more problematic. Moreover, we wanted to encompass not only the characteristics of a musical time, but also of musical pitch in this reformulation. Examining Tundra Nenets and North Sami musical examples from this point of view, we presented the principle of additivity and divisivity to include continuous or indiscreet forms of musical expression both in the realm of time and pitch. Furthermore, it is clear that this kind of conceptualisation is at best seen as a continuum, not an oppositional pair of structural possibilities.

This theoretical conceptualisation has consequences in the process of identification of the analytical parameters of a musical expression. Whereas traditional European forms of musical expression can be placed at the divisive end of this conceptual continuum, because their time and pitch structures are – in general – quite easily identifiable, much

non-European and especially tribal music can be placed at the additive end of this continuum. Thus, the northern Siberian and Scandinavian indigenous singing styles could be identified as additive.

In short, a musical structure is thus *divisive* if its elements of time and pitch can be identified in an unambiguous way. This unambiguity was also reflected in the conventional concept of divisivity, as rhythmical manifestations of a meter were seen as a coherent principle of dividing larger time units into smaller ones in some predictable way. The fundamental idea was to propose a steady pulse grid as a base, onto which rhythmical forms are built. Thus, for example, a duration of a $1/4$ had to be understood as combination of two durations of $1/8$. In our reformulation, similar unambiguity can be proposed in the identification of pitch structures: in some, say, European, traditional musical styles, the pitch continuum seems to be divided on some grid-form principle, as for example in diatonic or anhemitonic scales, yielding proportionally stable pitch and scale structures.

On the other hand, a musical structure is *additive* if there seems not to be any discernible structural grid onto which time or pitch structures can be said to be built. There may be no other way to form categories of, say, musical time, than to group their durational classes into “short” and “long”, with no measurable connection between them. This kind of musical structure seems to be a natural standard in many of the tribal, non-European musical styles. Thus, arriving at an analytic conclusion about this kind of musical structure can be very difficult. This situation makes it very difficult to label additive musical performances with unambiguous time or pitch structures. Identification of musical parameters is the more difficult, if we are not sure what to look for. Making an excessively accurate transcription of an additive musical style may miss the point, if we do not know what we are looking for. Accordingly, making a broad generalisation of a musical structure may blur that musical structure. The notational system as a metalanguage of representing an auditive, musical form in a graphic form is also at stake. This is why the problem of choosing structural parameters especially in the examination of an additive style becomes

very important. Furthermore, as the conventional European notational language has developed – as also the European musical styles have evolved – through the centuries to best describe a divisive musical style with fairly clear boundaries of its time and pitch elements.

Musical structures in Forest Nenets individual songs

In light of the foregoing, I should like to discuss two partially inter-related theoretical issues. The first is the problem of *structural identity of individual songs*. Inside the culture, the individual song is defined as a stable song form representing its author. To an outsider and to a musicologist, however, it is not always clear what is meant by “stability”. This is the central place to apply stylistic conclusions concerning musical parameters of analysis. If we have better insight into the ways the representatives of a musical style make structural distinctions in a song, it is naturally easier to draw relevant stylistic or comparative conclusions about songs. As a problem of musical analysis it is fundamental to have an opportunity to make comparisons with songs known to be identical as performed representations by the same person. However, it is not always an easy task to find performers who are able to sing variants of a requested individual song. Furthermore, it is an open question to what extent the external structural model of a song is identical to the original song form in the performance of performers *other* than the author of the song.

The second is the problem of *neighbouring styles*. During my fieldwork in 2003, I was happy to record a rare example of fusion style among the Nenetses. The study of song performances defined by the performers as containing stylistic elements of neighbouring ethnic singing styles is an intriguing task for future research, because of their (at times explicit) nature as a statement of stylistical boundaries of a song performance. Performances containing stylistic fusion point clearly to

the characteristics that the indigenous performers consider to belong to their own singing style as well as to the stylistical properties of their neighbours – as they perceive it.

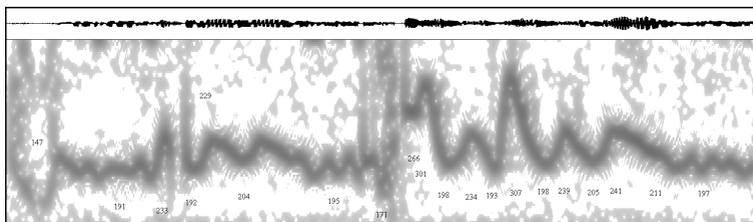
Before proceeding, let me state briefly that together with the Tundra Nenets, the Forest Nenets (autoethnonym *Nye”shang*) comprise the Nenets Samoyedic linguistic community. They are a minority of 2,000 individuals compared with the 35,000 Tundra Nenets. The territories of the Forest Nenets concentrate on the basin of the Pur River in western Siberian lowland. The upper Pur consists of two major tributaries, named after the traditional territories of the two major Forest Nenets clans, the *Ngaiwashatas* and the *Pya”ks*. The neighbouring river basins also have significant Forest Nenets populations. These adjacent regions are also zones of ethnic interaction with their neighbours. At the same time, they also define the dialect areas of the Forest Nenets. In the north, the Forest Nenets do not have an actual neighbourhood with the adjacent Tundra Nenets population, as there are very sparsely inhabited stretches of land at the lower Pur. In the west, the Forest Nenets territories – especially those of the other two Forest Nenets clans, namely the *We”las* and the *Dyiw”shis* intermingle with those of the northern Khanty at the upper Kazym and with the eastern Khanty in the south at the upper Agan. However, many of the *We”las* have territories along the upper Pur, as well. In the east, the Forest Nenets have contacts with the Selkups on the upper Taz and its western tributaries, such as the river Chasel’ka. All the following examples here are recorded and discussed among the Pur river Forest Nenets, and especially representatives of *Ngaiwashatas* and *Pya”ks*. At the same time, these major clans (with their various lineages) form two groups who usually intermarry.

Regarding the first issue discussed here, namely the problem of structural identity, let us briefly sketch a point of departure for one of our fundamental problems mentioned here, namely the problem of additive versus divisive musical styles. As the divisive structure is so obvious a fundamental for the European understanding of music (and its graphic presentation), are there any means of illustrating the

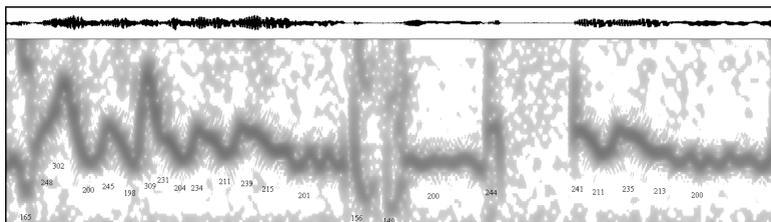
problem of additive structures? The extreme choices would be an “objective” visual graph representing the flow of a musical sound as registered and calculated by computer compared with a “subjective” use of the conventional notational system for the same musical sound. The computer-drawn graph should be thus more irreproachable to show what really is happening in the musical sound flow, whereas representing the same flow with the metalanguage of the conventional notation seems to be fraught with explicit or implicit compromises and possible misinterpretations of the original signal. However, there are great difficulties in reading the computer-drawn graph, whereas the conventional notation is, fundamentally, designed for easy reading.

The following initial four-line fragment of a Forest Nenets individual song (F Nen *kalhyita kinawsh*, ‘own song’) is represented both as a narrow range spectrogram (Ex. 1a) (which, because of its narrow range could be called only as a melogram) and as a conventional note transcription (Ex. 1b.)².

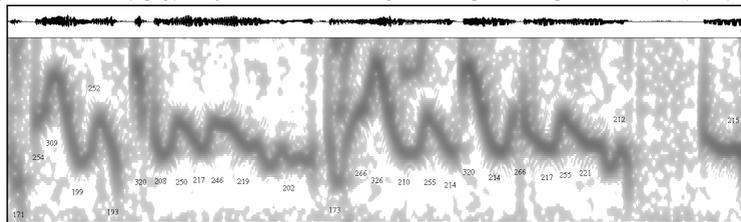
2. In all the transcriptions in this article, the actual performed tones sound an octave lower than what is written.



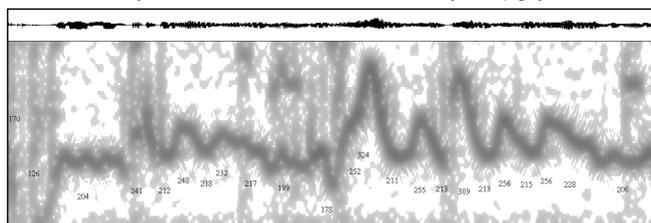
Ngai-wow - (ngey)-shey man - tey - nga (ngey),



Ngai-wow- (ngey)-shey man-tey - nga... nga (wow)



nya-khowlh dya-khow- chi - dyi (ngey... ey),



ta-lhyow mam-pey - nan - tow (ngey)

Ex. 1a. Igor' Wadyen-To Ngaiwashatang kinawsh. Perf. by Nina Okhlevna Wella (née Pankhey Pya"k). Spectrogram.

♩ = 102

ABB
AB
AB
ABB
AB

1. *Ngaiwow(ngey)shey manteynga (ngey), Ngaiwashey speaks,*
2. *Ngaiwow(ngey)shey manteynga (wow) Ngaiwashey speaks*
3. *– nyakhowlh dyakhowchidiyi (ngey) – – my three female reindeers –*
4. *talhyow mampeynantow (ngey). speak like this.*

Ex. 1b. Igor' Wadyen-To Ngaiwashatang kinawsh. Perf. by Nina Okhlevna Wella (née Pankhey Pya"k), recorded in Tarko-Sale, 15.9.2003 and transcribed by J. Niemi.

This representation serves here as an illustration of the characteristics of the additive Forest Nenets singing style. What kind of information or analytical insight is it possible to retrieve from these representations, representing a typical example of Forest Nenets individual song form with two slightly varying melodic lines repeated throughout the song?

First, the graph gives an overall picture of a melodic style, the main orientation of which can be called horizontal. Here this means that although the melody itself consists of undulating movement of the pitch levels, the overall direction of the melodic structure consists of recurring undulation within the tonal range revealed during the first line of the song. An opposition to this structural principle can be found, for example, in the Turkic singing styles of southern Siberia, where the melodic structure is characterised by descending orientation within a group of melodic lines. While the graph could be called a detailed, exact representation of the movement of the melody, it is not meant for

reading and thus it cannot be used as a notational language. Reading this kind of graph together with listening at the corresponding audio recording may give new understanding to this representation. It may be heard that the additivity governs the pitch level structures, in that there seem to be considerable margins in the variation of the pitch levels – at structurally identical positions, as we remember that the performer repeats similar melodic lines throughout the song. Moreover, almost the entire graph consists of diagonal, zigzag fluctuation. The more slanting is the ascent or descent, the more continuous is the arrival at or leaving from the pitch peak. This is something that the conventional notation is not designed to illustrate.

Second, with the conventional notation it is possible to make a statement or an interpretation about the overall structure of the melody. It is possible to describe the peaks and dips of the melody with some accuracy. However, it is more tedious to give a readable form to the continual pitch level movement, represented in the spectrogram graph as a slanted saw-tooth form. With the conventional notation it is easier to make a more explicit interpretation of the metrical structure of the melody, the more so if it is anchored in the interpretation of the metrical qualities of the song text.

Thus, a new perspective of reading emerges if we make both the conventional notation and the spectrogrammic graph. It becomes clear that conventional notation cannot fully account for this kind of continuous fluctuation of the melody. One possibility is to merge these representations together, where the conventional notation represents a kind of ideal and interpreted form and the graph merged into the same picture shows the “actual” form of the melodic progression.

Presented together or separately, analytic conclusions should be drawn and this represents yet another task worth designing. An adequate analytic conclusion should include the principle of the metrical structure of the melody, likewise a conclusion about the fundamentals of the pitch formation. In the final account these two should be described together, as it is obvious that the metrical basis of this kind of elastic musical structure comes from the metrical fundament of the song text, as transformed

into an acoustic form. This sung text, in turn, is welded into the pitch fluctuation not in a random manner. Therefore, analytical conclusions of the present song are:

1) Metrical organisation

The typical Nenets hexasyllabic³ and isometrical verse form is realised in this song in the following forms. The metrical basic forms of the verse form text consists either of words with

a) even number of syllables (S) (later referred to as “222” type) and with optional supplementary syllables ((S)), exemplified by line 4. in the following way. It has to be noted that the durations expressed with the notational symbols are rough approximations, presented so as to refer to the oppositional character of the real durations (as a continuum of short–long durations):

S	S	+	S	S	S	S	(S)
♪	♪		♪	♪	♪	♪	(♪)
ta -	lhyow		mam -	pey -	nan -	tow	(ngey)

or of words with

b) odd number of syllables (later referred to as “33” type) and with optional supplementary syllables, exemplified by line 1. as

S	S	(S)	S	+	S	S	S	(S)
♪	♪	(♪)	♪		♪	♪	♪	(♪)
Ngai -	wow	(ngey)-	shey		man -	tey -	nga	(ngey)

Thus, the first methodical requirement in the structural analysis of a Nenets hexasyllabic song is to identify these two basic verse types and

3. Peculiarly, this hexasyllabic (trimetric) principle concerns only the Nenets *secular* songs. Most of the *sacred*, shamanistic songs are sung with an (octosyllabic) tetrameter (for more detail see Niemi 1998, 73–77).

to characterise their metrical realisation in a rhythmic form. During this phase of analysis, it is necessary also to identify the ways the supplementary syllables are placed in actual verse forms in these basic verse types, because they tend to be unique to each song.

As we are aware of the principle of word-initial stress in Nenets language, it is possible to postulate another metrical norm (obviously, not on the basis of this short example, but by analysis of larger song corpora (see Niemi 1998, 93–100)). This is the principle of the rhythmical realisation of the (word-initial) stressed syllables as short durations. Thus, the word stress tends to be reflected in a sung form *not* as a long or melismatic duration, but as a sharp, accentual short one.

2) Pitch organisation

The previous procedure for identifying the metrical fundamentals of a single song is also an indispensable analytic phase in arriving at conclusions about the pitch organisation. The song example in question is an example of an additive pitch organisation, where the scheme constructed with conventional notation is hardly of any help if the basic principles of additive pitch organisation are not discussed.

The analyses of several Tundra and Forest Nenets song corpora revealed that the overall melodic orientation in the Nenets songs is horizontal. This means that the melody tends to undulate in a tonal space governed by one single pitch level that we call as a *primary constitutional tone* (much in a same way as Alekseev (1976)). A typical realisation of this phenomenon is that this fundamental support tone appears both as the initial and final tone of a song. In other song styles (as in Turkic southern Siberia or among the Selkup) the overall melodic orientation can be markedly descending, where the initial tone of a song can resound an octave higher from a final sound (usually in a structure consisting of a grouping of several melodic lines).

Thus, typical of the Nenets type of additive pitch organisation is that the actual pitch levels of a song can fluctuate quite freely. This feature is well exemplified in the notation example. The question is,

how to make an analytical statement about the internal order for these kind of tonal phenomena?

In this analytical phase the motif structure of the song is analysed. The results can be presented in the graphical form of conventional notation, as is done in the example. The crucial point here is to identify the recurring motif elements in a song and the way the whole lines are constructed of the motifs. The presentation of this phase can be done with conventional notation, but the syntactic features in common must be presented as motif segments aligned vertically in the notation. In the Nenets case, the isometric constitution of the (hexasyllabic) songs usually gives quite clear clues to the motif construction of the level of a melodic line, the more so, as we know that the isometrical principle of construction concerns both the melody and the text.

The notation example was presented for easy reading by minimising the amount of unconventional notational symbols. Still, no pitch level interpretation was made in order to exemplify the wide variation in the realisation of the tonal levels. Thus, what we have here may seem quite a disturbing note transcription of a musical phenomenon. However, a closer look may clarify the situation.

The next step in this phase of analysis is to identify the primary constitutional tone of the song. In the present song, the pitch level marked with the note g^1 seems to occur quite consistently in initial, medial and final positions. When its occurrences are examined in various places in recurring motif structures, it becomes evident that the additive tonal system of the present song allows this tonal level to be realised not only as g^1 , but as a wider tonal pitch band encompassing pitch levels of $f^1-g\#^1$. Below the pitch level (band) of g^1 , there is a pitch level (band) of d^1 , which seems to occur primarily emphasising the line-initial g^1 . It is a matter of interpretation whether this level should be considered as another constitutional tonal level.

The analytic process of identification of the pitch levels of the present song continues by examining the pitch levels above the primary constitutional tone (g^1). Again, by comparing pitch level phenomena occurring in structurally similar position, a pitch level stem of $d^2-h^1-a^1-g^1$

is discerned – with a considerable amount of fluctuation in pitch levels. Of these, an autonomous, descending melodic movement $h^1-a^1-h^1-a^1-g^1$ is presented in quite an emphasised melodic motif level movement. The highest pitch level peak is d^2 , the function of which seems to be more for emphasis and opposition than for participation in the formation of the motif level melodic shape, as it is invariably followed by g^1 . Because of similar kinds of functional restrictedness of the lower d^1 , it could be reasonable to interpret both these extremes of the tonal range of this song as emphatic rather than constitutional tonal levels.

Thus, the fluctuating pitch band levels could be maintained to group in a form reminiscent of an anhemitonic modal structure of $d^2-h^1-a^1-g^1-d^1$ – with g^1 as the primary constitutional level, the motif movement between $h^1-a^1-g^1$ as the core of the melodic formation and the extremes of the tonal range d^1 and d^2 as emphatic, additional tonal levels in this song. However, the directions of a pitch level analysis of the additive tonal structure outlined here must obviously be carried out with a larger song corpus.

3) Correspondence between metrical and pitch level phenomena

A more profound understanding of the internal structural logic of a cultural phenomenon includes not only identification and argumentation concerning form, but especially an understanding of how the form functions as an organisation of internal logic of structural interrelationships. What makes the form tick, or reproduce itself, for that matter? A structural examination of functioning of a cultural phenomenon, such as a traditional song with its peculiar stylistical norms is largely evaluative of how the form fits together and what the possible norms of concatenation of its constituent parts might be. Fundamentally this aspect of the matter is about syntax. Are there discernible principles that imbue the form with order?

The Nenets song style is a beautiful, although at times quite tedious an example of the possibilities for studying syntactic formations in song structures. If we are aware of the principles of metrical and tonal

analysis (as exemplified in the previous phases), we should be more ready to proceed in examining if there is any correspondence between these fundamentals of the structure, as we know that they coexist and interact in one – in an acoustic performance of the song.

It was already noted that there seems to be a correlation between the accented syllables of a song text and their realisation as an acoustic flow of sound. The analysis of syntactic correspondence of metrical and pitch level phenomena should concentrate on this interrelation more closely. This is not possible in the context of this presentation, but even with this analytical example it becomes clear that there is a correspondence and with this kind of structural analysis it is possible to proceed to achieve an understanding of the structural and syntactic laws governing this kind of northern indigenous song style.

As a short summary of the questions to be solved, it seems that the word-initial syllabic *accentuation* often gives clues to the primary constitutional tones of a melody, whereas the melodic process proper is located in melismatic motif passages carrying the *unaccented* syllables. The next analytical question is how to use the analytical insights gained from this kind of structural analysis. One possibility is to proceed to examine the structural identity of individual songs, whether by comparing different songs on various levels of relatedness or variants of songs defined by the bearers of tradition as identical.

The question of structural identity of songs

Accounting for the structural identity of the individual songs is, as mentioned before, dependent on the availability of variants of a song. These are regrettably rare, but the next song example gives some directions toward the analysis of song variants. Furthermore, with this example it is possible to point to the larger question behind this kind of comparative structural analysis: what kind of acoustic performance form is considered to be “the same” or “identical” by the representatives of the local culture?

In the following examples (2a, 2b) variants of an individual song of one of the last seers of the Pur-Chasel'ka region Forest Nenets, Lyalya Inyi" kavich (Pankhey) Pya" k (b. 1941) are presented. The variants were recorded from the performances of two different singers on different occasions (with a five-year time gap between the recordings). Both singers belong to the next generation after L. I. Pya" k and have a distant relationship to him, either by blood (N. O. Wella) or by marriage (A. U. Ngaiwashata).

♩ = 108

A
Pya" key mam-pey - na - dyey (ngey),

B
ta - lhyowm' mam-pey - na - dyey (ngey),

C
I - nyi" kang ka - dyey - mey (ngey) (ngey... ey).

A
ngo - pey' ta - dyow - me - ngow (ngey),

B
Pya" key(n) ta - dyow - me - ngow (ngey... ey),

C
num - keym - po - dyey(ng) kã - khew (ngey)...

ABC
ABC
ABC (...)
ABC

- | | |
|---|--|
| 1. <i>Pya"key mampeynadyey (ngey),</i> | <i>Pya" k speaks,</i> |
| 2. <i>talhyowm' mampeynadyey (ngey):</i> | <i>speaks like this:</i> |
| 3. <i>– Inyi" kang kadyemey(ngey) (ngey),</i> | <i>– The descendant of Inyi"ka,</i> |
| 4. <i>ngopey' tadyowmengow (ngey),</i> | <i>the one there is,</i> |
| 5. <i>Pya"key(n) tadyowmengow (ngey).</i> | <i>Pya" k there is.</i> |
| 6. <i>Numkeympodyey(ng) kãkhew (ngey)...</i> | <i>The heavenly spirit (shaman)...</i> |

Example 2a. Lyalya Inyi" kavich (Pankhey) Pya" king kinawsh. Perf. by Aku Uchetatovich (Dyangklhyota) Ngaiwashata (Upper Chasel'ka), recorded in Tarko-Sale, 1.9.1998 and transcribed by J. Niemi.

The metrical scheme:

"222" type:									
(initial segment:)			(medial segment:)				(final segment:)		
S	S	+	S	S	S	S		(S)	
Pya" - key			mam - pey -		na - dyey		(ngey)		
"33" type:									
S	S	S	+	S	S	S	(S)	(S)	
I-nyi" -kang			ka - dyey -		mey (ngey)		(ngey)		

A. U. Ngaiwashata's rendition is constructed by repeating of a string of three melodic lines (A, B, C) varying in their initial segments, but more similar in their medial and final segments. Rhythmic variation between "222" and "33" metrical types is realised by a typical way of locating a trisyllabic word (= *Inyi*"*kang* in the example) in the "33" type into the initial segment (and adding a euphonic *ngey* at the end of the medial segment).

The modal centre is emphatically the primary constitutional tone (e^1 in the transcription), from which the melody leaps to the upper secondary level ($g^1-g\#^1-a^1$) or below the primary constitutional tone (to $c\#^1-H$). This modal construction is reminiscent of the La-anhemitonic root ($h^1-a^1-g^1-e^1-H$), but with great fluctuation in pitch levels. One of the most characteristic parts of this melody is the initial motif of the melodic line A, which boasts the masculine energy of both the creator and interpreter of the song. Perhaps more the interpreter, because the performances of (other) individual songs by the very L. I. Pya" were mostly characterised by his peaceful and serene low register voice.

♩ = 156

ta - lhyam' nam - pi - nan - ta,
 I - nyi' - kang nyu - cha nyu... ow (ngey),
 Dyan' - lhyu - dying she - tey mey (nge... ng),
 Yu - re - chy - king i - lyi,
 nya - khalh dyu dya - kha... kha - chey,
 nyi - shya - ning ka - dyi - mi,
 I - nyi' - ka nyu - chow nyow (ngey),
 ta - lhyam' ka - na - nga - tow.

1. Talhyam' mampinanta,
2. Inyi" kang nyucha nyu... ow (ngey),
3. Dyan' lhyudying sheteyme (nge... ey).
4. Yurechyiking ilyi,
5. nyakhalh dyu dyakha... khachey,
6. nyishyaning kadyimi,
7. Inyi" ka nyuchow nyow (ngey),
8. talhyam' kanangatow.

*He said like this,
 the youngest son of Inyi"ka,
 Dyan' lhyuy' gave birth (to him).
 Yurchyik's grandfather (or uncle),
 thirty female reindeers he has,
 left by his father (to him),
 the youngest son of Inyi"ka,
 this is how he goes on (speaking).*

Example 2b. Lyalya Inyi" kavich (Pankhey) Pya" king kinawsh. Perf. by Nina Okhlevna Wella (née (Pankhey) Pya" k), recorded in Tarko-Sale, 15.9.2003 and transcribed by J. Niemi.

The metrical scheme:

"222" type:						
(initial segment:)					(medial segment:)	(final segment:)
S	S	+	S	S	S	S
♪	♪		♪	♪	♪	◦
ta -	lhyam'		mam -	pi -	nan -	ta
"33" type:						
S	S		S + S	S	S	(S)
♪	♪		♪	♪	♪	♪
Dyan'	-lhyu -		dying she -	tey -	mey	(ngey)

N. O. Wella's rendition sounds like an altogether different song. This is, by all means, also possible, since a prolific individual may have more songs – added to the fact that they can be multiplied into an even bigger grouping of songs by the performances and interpretations of these songs by other people.

The metrical scheme in Wella's rendition is even more elementary than in Ngaiwashata's variant. Here, to the "222" metrical type no euphonic syllables are added, whereas the "33" type is marked by a euphonic *ngey* in the end of the final part. Thus, this metrical scheme is in no way identical with that in Ngaiwashata's variant. The only resemblance is that the rhythmical pulsation of Wella's *initial* segment corresponds to Ngaiwashata's *medial* one, surrounded by the melismatic segment passages, as if in both renditions a similar segment structure was arranged into a different order in respect with the borders of melodic lines.

The modal centre and the primary constitutional tone in Wella's variant is g^1 . (Note that these melodies are *not* transposed into the same tonality – Ngaiwashata's primary constitutional tone was marked with e^1 and Wella's with g^1 .) It is also characteristic of this variant that the secondary constitutional tonal levels revolve around the primary one

– either upwards ($a^1-b^1-h^1$) or downwards ($(d^1)-e^1-(f^1)$). In Wella's rendition, the modal basic structure is yet more open to interpretation ($h^1-g^1-e^1$).

Thus, this brief structural analysis reveals that Ngaiwashata's and Wella's renditions are built of metrical and motif materials reminiscent of each other, but to an outsider there is no convincing way to maintain that these renditions are identical or even strongly reminiscent of each other. There is no point in this, but the future task for this kind of structural analysis is to continue discussion with the performers about the concept of identity reflected in the musical structure. This discussion is only at the beginning with Forest Nenets informants and it will open up intriguing views also adding to our European understanding of the inner qualities and the question of the identity of a musical structure.

The question of neighbouring styles

The second question in this paper concerns indigenous musical performances, which contain clues to explain the local understanding of different musical styles. Until the dawn of the revolutionary era of ubiquitous information, it used to be very rare for a tundra or taiga dweller to hear different indigenous musical styles. At best, people living in borderlands were more likely to have experience of musical styles other than their own. Among the indigenous people of western Siberia there are only few places where this kind of information flow is more expected, particularly those where the neighbouring musical styles have more or less pronounced differences in the constitutive principles of their musical structures.

One of those regions with interesting areal interaction in musical sense is the Pur River and especially its eastern tributaries. Here the Forest Nenets have had centuries of social interaction with the Taz River Selkup – ranging from tribal warfare to interethnic marriages.

The constitutional principles of Forest Nenets and Selkup musical styles are quite different and are manifest in both the tonal and metrical structures of the songs. While the (Forest) Nenets song tends to occupy a *horizontal* overall profile in the fluctuation of the melody (governed by a strong presence and frequency of one primary constitutional tone), perhaps the most emphasised general characteristic of the Selkup songs is their *descending* melodic profile (on the (northern) Selkup melodies, see Niemi 2001, 2002).

Different construction principles are also discernible on the level of the metrical characteristics. Whereas the Nenets metrical unit is isomorphic: a hexasyllabic and trimetric unit of text and melody throughout the song (as in the previous Forest Nenets examples), the Selkup song has no such a solid structural formula. At best it can be said that the Selkup songs consist of smaller metrical units containing four-syllable units of song text, but with a greater freedom of combination with larger metrical groupings. This is also reflected at the level of language and its transformation into a song form language. This also includes the euphonic word forms: whereas the Nenets elementary euphonic word is “*ngey*”, the Selkups use either “*nay/näy*” or “*an*”. Although both the Nenets and Selkup languages belong to the linguistic group of Samoyedic languages and share some elementary lexical, morphological and syntactic features, there are great differences between these languages. For reasons not yet fully understood, these differences appear undisputedly in song language.

The last song example was recorded at the peaceful forest camp of Viktor Nya”kuchevich (Dyangklhyota) Ngaiwashata at Medvezh’e Gora near the village of Kharampur on a sunny autumn day. V. N. Ngaiwashata himself is a skillful singer and specialist in traditional knowledge. We recorded many interesting songs of a narrative character from his repertoire. (The recording session was made possible by the help of Polina Gilevna Turutina (née (Dyangklhyota) Ngaiwashata), one of the best known specialists in Pur River Forest Nenets folk traditions and songs).

Viktor Nya”kuchevich’s wife Evdokiya Lyakatovna Ngaiwashata (née Pankhey Pya”k), also a profound connoisseur of the Kharampur region Forest Nenets traditions, had many interesting individual songs in her repertoire. One of the most interesting was the song of Galina “Sääsäy⁴”, “Kuli” Kolokolets, a woman born probably during the 1920–1930’s. G. Kolokolets was married to Nyach’ Kolokolets, a Selkup, but having her native roots in the Forest Nenets kin of the Pankhey Pya”ks, she represented a fully bicultural person. Furthermore, she was said to master shamanistic skills of making a soul travel to the spirit world. These are reflected in the song of G. Kolokolets as allusions to themes of foretelling or soul-travel. I should like to present this extraordinary song in its entirety, also because it is easier to grasp its bicultural structural features (Ex. 3):

4. ‘Eyeless’ – meaning ‘small-eyed’ by her outer appearance – even by Nenets standards.

$\text{♩} = 138$ "al"-rf-a1

ka - tow ka - tow ma - nge (a - an),

ka - tow mam - pey - nan - tow (o - ow a - an),

Ku - li ka - tow mam - pey - nan - tow (o),

po - na - khow man - tow nya - khali ka - pyi - ka nye (nge) (o - ow an),

nya - khali wa - khun - dya nye (ngey) ka - ta - lhow mant - ngow (o - ow a a - an),

Oy nye - shya - kha - now ngalh - ka - ma - na wai - ma
syon - sya - ku - tyi wai - mu (o - ow an),

ka...

Kho - ma - lyo - ta - kha - na syun - sya - dye - tyey wai - mow,
ka - p(a) - na - dyey nyi - dyey lhow - pe - dying ka - na - na - dya (ney nge an),

ka - ta - lhow man - ti - ngow (o - ow a)...

Kho - ma ku - ta - dya - dyi dyi - ley - dyi - ney
o - cha - ta - tyey tesh - tow - n(e) (o - ow an),

nyan ta - dyey ta - shay - tu - ney
shiyay ta - dyey pyi - lesh - tu - ney (o - ow an),

Continued on the following page →

- | | |
|---|--|
| 1. A <i>Katow katow mange (a-an),</i> | <i>Grandmother says,</i> |
| 2. B <i>katow mampeynantow (o-ow-a-an).</i> | <i>grandmother speaks.</i> |
| 3. A <i>Kuli katow mampeynantow (o),</i> | <i>Kuli-grandmother speaks,</i> |
| 4. B <i>ponakhow mantow:</i> | <i>already a long time speaks:</i> |
| 5. <i>– Nyakhalh kapyika nye (ngey) (o-o-an),</i> | <i>– Wife of the three Selkup⁵,</i> |
| 6. <i>A nyakhalh wakhandya nye (ngey),</i> | <i>wife of three Khantys,</i> |
| 7. <i>katalhow mantingow (o-ow-a-a-an).</i> | <i>your grandmother speaks like this.</i> |

5. In Forest Nenets usage, the exoethnonym “Kapi” contains a reference to both ‘Selkup’, ‘Khanty’, ‘not us’ and ‘slave.’ Interestingly, besides “Kapi”, in the next line G. Kolokolets also refers to herself as “nyakhalh Wakhandya nye” ‘wife of three Khanties’, with probably also an exoethnonymic reference to the people of the River Vakh.

8. B	Oy nyeshyakhano	Concerning father Oy
9.	ngalhkamana waima,	I feel very bad,
10.	<u>syonsyakutyi waimow (o-ow-an),</u>	<u>my inside feels bad,</u>
	ka...	
11.A	Khomalyotakhana	concerning Khomalyota
		(Oy's father)
12.	syonsyadyetey waimow.	(I feel) bad inside.
13.	Kap(a)nadyey nyidyey,	If I die, the children
14.	lhowpedying kananadya (ney nge-an),	all I take with me,
15.B	<u>katalhow mantingow (ow-ow-a...).</u>	<u>your grandmother speaks.</u>
16.A	Khoma, ku(p)tadyadyi	Good, long
17.	dyileydyiney,	live,
18.	ochatyatey teshtown(e) (o-ow-an),	you shall pick berries for me,
19.B	nyan tadyey tashyeytuney,	bread you shall give me,
20.	shay tadyey pyileshtuney (o-ow-an).	you shall make tea for me.
21.A	Katalhey kantow,	Your grandmother drives,
22.B	numkana kantow (o-o-an).	to the heaven drives.
23.	Katalha mantingow,	Your grandmother speaks,
24.	kapyidyey nyedyadyey,	the great Khanty wife,
25.	<u>kotulhtanti ama (a-a-a)...</u>	<u>mother of the coughing one.</u>
26.A	Talyam' kaipinantow,	As it happens,
27.	dyang ngilh(i)na kesheyutey,	under ground I shall go,
28.	dyata ngilhna kesheyutey (o-ow-an).	under ground I shall go.
29.B	Numkanow kanetow	To the heaven travelling
30.	<u>katalhow Kuli katakodyey (o-ow-an),</u>	<u>your grandmother Kuli,</u>
31.A	kotulhtanti nyemya,	mother of the coughing one,
32.	Syakanti amowku (ow-an),	Syaka's mother,
33.B	Muntalyanti nyemyow,	Muntalyanti's mother,
34.	<u>katalhow mantingow (o-o-an).</u>	<u>your grandmother speaks.</u>
35.A	Khomalyotakhana	With Khomalyota
36.	ngalhkamana waima,	(it is)very bad,
37.	syonsyadyetyi waimow (o-ow-ow).	in inside bad.
38.B	Katalhow kin(e)samta	Your grandmother to sing
39.	<u>kanowngatow (o-o-a).</u>	<u>prepares.</u>

Ex. 3. Sääsäyng kinawsh. Perf. by Evdokiya Lyakatovna DyangkIhyota Ngaiwashata (née Pankhey Pya"k), recorded in Medvezh'e Gora, 17.9.2003 and transcribed by J. Niemi.

This song with 39 text lines demonstrates a song structure on other than the (Forest) Nenets isometric (hexasyllabic) principle. It includes mostly hexasyllabic lines, but in another kind of metrical environment. In order to illustrate this, I have divided the song text (see above) with lines corresponding to musical line groups, marked with symbols A and B. Whereas the Nenets isometrical principle means that a melodic line has to correspond to a text line, here one melodic, recurring group of segments corresponds to *several* text lines. In this interpretation, “A” refers to descent from the upper limits of the melodic range to the final segment of the melody and “B” to the repetition of a segment (mostly in 5/8 time, furthermore in a rhythmical construction of 2+3/8 very typical to Selkup songs) from lower tonal level, also ending in the final segment.

It becomes clear that these “AB” groupings correspond to units of sentence meanings of the text, in some cases even extending this limit (ABAB). This is all due to the fact that the emphasised descending style within the tonal range of an octave (a^2-a^1 in the transcription) is a very persuasive structural element, which clearly governs the segmentation of the textual content.

Summarising the modal characteristics of this song also reveals principles not met in many (Forest) Nenets songs. Notwithstanding the tonal fluctuation of some tonal degrees, it seems that the modal structure is presented in general in a more stable constellation than in the previous Forest Nenets examples. The modal constitution of this song is interpreted here as one with clear La-anhemitonic structure $a^2-(g^2)-e^2-d^2-c^2-a^1$, with realisation of the tonal level of, say, e^2 as a band of ($f\#^2-f^2-e^2$) and with some other minor fluctuations of tonal levels marked in the transcription.

The following presentation (Fig. 1) of the same song text examines the metrical properties of the whole song. This song is sung with a full Forest Nenets text, which, mostly, conforms to the general Nenets hexasyllabism. However, there are some elements, which are rather unexpected in (Forest) Nenets song style. First, as already mentioned, the hexasyllabic line does not conform to one melodic line, but the

melodic grouping of line-scale motifs seems to absorb several (hexasyllabic) lines.

Moreover, as emphasised in the metrical text scheme with italics, there are also *other* than hexasyllabic lines in this song. They seem to be octosyllabic – or tetrametric, if we want to emphasise the principle, rather than the variation of occurrences. The scheme is divided so that the two first vertical lined areas correspond to the most general occurrence of the basic trimetric (hexasyllabic = Nenets secular) line. Some of the trimetric “Nenets” lines extend to the area of the third vertically delineated area. Most probably they are the result of the initial phase of the song performance with performer’s efforts to stabilise the structure. The rest of the cases are those italicised: they are tetrametric (octosyllabic) by nature. Mixtures of trimetric and tetrametric principles in Nenets song forms are extremely rare, so that there seems to be a reason for this performance to contain both the Nenets metrical principles.

On the other hand, if we consider this song from the bicultural point of view, we could say that in this performance are included both Forest Nenets and Selkup principles of song construction. There are no clear distinction of secular and sacred genres in Selkup song versification – most of the available the Selkup song materials point to the existence of a tetrametric principle, whether realised in a full form or in a segmentary one. We could maintain that this peculiar song example consists of both the Nenets trimetric principle and the tetrametric – whether representing the sacred meter of the Nenets or the Selkup meter in general. The marker of the Selkup sacred meter, if any, could be the line-final segment with the euphonic syllables (*o-ow-a-an*), which mark the Selkup shamanistic genres (see Niemi 2001). These do not occur in any Forest or Tundra Nenets song materials.

1. A	Ka -	tow	ka -	ka -	ka -	ma -	ng	(a -
2. B	Ka -	tow	tow	mam -	pey -	nan -	tow	ow
3. A	Ku -	ka -	ka -	mam -	pey -	nan -	tow	a -
4. B	po -	na -	khow	man -	tow:	nan -	tow	an).
5.	-Nya -	khalh	ka -	nve -	ng			
6. A	nya -	khalh	wa -	nye	(ng			
7.	ka -	ta -	lhow	mam(i) -	ngow			
8. B	Oy	nye	siya -	kha -	now			
9.	ngalh -	ka -	ma -	wai -	ma,			
10.	syon -	nya -	ku -	wai -	mow			
11. A	Ka...	lyo -	ta -	kha -	na			
12.	syon -	nya -	tey	wai -	mow.			
13.	Ka -	p(a) -	nye	nyi -	dye,			
14.	chow -	pe -	dyng	ka -	na -			
15. B	ka -	ta -	lhow	man -	ti -			
16. A	Kho -	ma	ma	ku(p) -	ta -			
17.	dyi -	lhey -	tey	dyi -	nye,			
18.	o -	cha -	tey	tesh -	town(e)			
19. B	nyan	ta -	dyey	ta -	sh			
20.	shay	ta -	dy	pyi -	lhesh -			
21. A	Ka -	ta -	lhey	kan -	tow,			
22.	num -	ka -	na	kan -	tow			
23. B	Ka -	ta -	lha	man -	ti -			
24.	ka -	pyi -	dyey	nye -	dya -			
25.	ko -	tulh -	tam -	a -	ma			
26. A	Ta -	lyam'	kai -	nan -	tow,			
27.	dyang	ngi -	lh(i) -	ke -	sh			
28	dy	ta	ngilh -	ke -	sh			
29. B	Num -	ka -	now	ka -	ne -			
30.	ka -	ta -	lhow	Ku -	li			
31. A	ko -	tulh -	tam -	nye -	nya,			
32.	Sya -	ta -	lyan -	a -	mow -			
33. B	Mun -	ta -	lhow	nye -	myow,			
34.	ka -	ta -	lhow	man -	ti -			
35. A	Kho -	ma -	lyo -	kha -	na,			
36.	ngalh -	ka -	ma -	wai -	ma,			
37.	syon -	nya -	dyey	wai -	mow			
38. B	Ka -	ta -	lhow	ki -	n(e) -			
39.	ka -	now -	now -	nga -	tow			

Fig. 1. The metrical scheme of the song text in the Ex. 3.

Finally, the discussion after the performance with E. L. and V. N. Ngaiwashata corroborates this:

E. L.: Like this! ...wife of the three Kapi, wasn't it?

V. N.: If translate it all, it is a very mournful song, you could even shed tears with it... As if she goes to the god. To the underground kingdom she goes.

E. N.: She was a shamaness... [sings] ow-a-an! She travels under ground and under water, also in the sky.

J. N.: Is this why the melody of the song sounds like something else?

E. N.: Yes, yes...

V. N.: Well yes, you could say that...

P. T.: (in Forest Nenets) Who were her parents? Whose child she was? This Kuli's...?

E. N.: (in Forest Nenets) About Kuli I don't know...

Conclusion

Addressing the question of the structural identity of variants of the songs claimed to be the same: (Forest) Nenets song style, as a representative of the zone of the northern indigenous peoples of the northern hemisphere, seems also to offer other than musicological solutions for choosing the parameters of their structural analysis. For example, the individual songs exist as separate songs realised as different interpretations by different performers, but also as a whole, creating an unseen network of social relationships. Perhaps the songs have a meaningful existence only in the context of the social network of songs (and corresponding individuals)? Perhaps it would be more important to concentrate on synthesis than analytic derivation? It is very likely that the question of musical reminiscences has to be integrated into a more extended discussion of formal identities concerning other than mere coincidences of modal or metrical characteristics.

Therefore, also in the present approach, the questions of relevant parameters in the analysis of musical structures are also sought with the help and ideas gained from insider knowledge, such as the genealogical approach. Perhaps the alleged family relationships between the authors and performers of the songs should be included in a discussion of the musical characteristics of related songs as a weighted argument for a musical identity of a song structure? In any case, the information gained from a genealogical investigation must be considered as a support to the musical one.

The framework of this kind of structural interest is twofold. First, it is designed to give solutions to more general areal problems of style. In the case of the singing style of the Nenetses, for example, the question is about the areal limits of the metrical system of the northern Samoyeds in the context of the song traditions of the indigenous western Siberia. Second, the structural analysis has to provide a perspective of placing the metrical system of the northern Samoyeds into a larger comparative Uralic context.

The problem of the approach of comparing the song variants is the uneven distribution of the knowledge of the song network, because of the gradual vanishing of the tradition of individual songs. Therefore, there are more and more white spots on the Nenets songmaps. In our understanding, however, any effort is welcome in this exciting and little studied area of northern indigenous traditions.

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