

ATTRITIONAL PHENOMENA IN THE NIVKH LANGUAGE ON SAKHALIN

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Nivkh is a seriously endangered language spoken on Sakhalin Island and in the Amur region of the Russian Far East. Due to a variety of historical reasons, even the most fluent Nivkh speakers nowadays prefer to communicate in Russian. The current linguistic situation is inevitably leading to a decrease of Nivkh language proficiency and to the reduction and simplification of the language. This paper examines attritional phenomena in the realms of consonant alternations, kinship terminology, and numeral classifiers. The authors' fieldwork on Sakhalin in 2014 revealed that these elaborate and authentic systems have undergone substantial changes in the speech of modern Nivkh speakers.

Нивхский язык, на котором говорят на острове Сахалин и в Амурской области на Дальнем Востоке России, находится под угрозой исчезновения. В силу различных исторических причин в настоящее время даже наиболее компетентные носители нивхского языка предпочитают говорить по-русски. Современная языковая ситуация неизбежно ведет к снижению компетенции в нивхском языке, а также к редукции и упрощению языка. В статье рассматриваются аттриционные явления в области чередований согласных, терминологии родства и числовых классификаторов. В речи современных носителей языка эти сложные аутентичные системы подверглись существенным изменениям, которые стали очевидны во время полевой работы авторов на Сахалине в 2014 г.

1. INTRODUCTION

Nivkh is a seriously endangered language currently spoken by c.150 people on Sakhalin Island and in the Amur region of the Russian Far East. Nivkh has become obsolescent due to a gradual shift to the dominant Russian language as a result of a whole set of political, socioeconomic, and cultural factors that are responsible for the decay of many minority languages not only in Russia, but also elsewhere in the world (see, e.g. Dorian 1981; 1982; Kibrik 1991; de Graaf 1992; Vakhtin 2001; Gruzdeva 2015b; 2016). Nowadays, Nivkh is a recessive language that has lost its functional domains, is rarely used in everyday communication, and is not transmitted to the younger generations. The current situation is inevitably leading to a decrease of language proficiency, a development known by

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names such as language attrition, loss, decay, decline, contraction, deacquisition, and others (see Craig 1997: 258). Similar to other recessive languages (see, e.g. Mühlhäusler 1974; Trudgill 1974; 1983; Andersen 1982; Campbell & Muntzel 1989; Dressler 1991; Sasse 1992; 2001; Romaine 1995; Palosaari & Campbell 2011; Aikhenvald 2012), modern Nivkh exhibits a whole range of simplifying and reductive phenomena, observed at different levels of the language. These phenomena typically involve the elimination of competing structures and the loss of structural elements without the introduction of corresponding new patterns. There are also other, often contact-induced, types of structural transformation (see Gruzdeva 2000; 2002; 2007; 2010; 2015a). The changes that can be observed in Nivkh affect, in particular, features that are not shared with the dominant Russian language.

During their field work on Sakhalin in August 2014, the authors of this paper carried out a survey aimed at determining the level of preservation/loss of several typical properties of the Nivkh language among the remaining speakers of different ages and proficiency. The survey was conducted in Yuzhno-Sakhalinsk, Nogliki, Okha, and Nekrasovka, and involved the speakers of the East Sakhalin (ES), North Sakhalin (NS), and West Sakhalin (WS) dialects.¹ Juha Luukkonen investigated the changes that have taken place in the mechanism of consonant alternations (Section 2 below), Arttu Anttonen, Saana Santalahti, and Turo Ylitalo studied the maintenance of kinship terminology (Section 3), while Erika Sandman examined the modification of the system of numeral classifiers (Section 4). After presenting the concrete results of the research, this paper summarizes the authors' findings and observations, and discusses the conclusions from the more general perspective of Nivkh language attrition (Section 5).

2. CONSONANT ALTERNATIONS

The Nivkh language is typologically known for its system of morpheme-initial alternations between homorganic obstruents, as described in numerous works (e.g. Kreinovich 1937; Jakobson 1957; Hattori 1962; Gruzdeva 1998; Nedjalkov & Otaina 2013). In this paper, these alternations will be referred to by the term Consonant Mutation (CM) on the model of Shiraishi (2006). Lately, it has been observed (Gruzdeva 2002: 94–95; 2015a: 160–161) that the alternation system is losing its productivity, and the current piece of research, based on fieldwork on

¹ The West Sakhalin (WS) dialect is closely related to the continental Amur dialect (A) and is often classified together with the latter. The survey underlying the present paper was, however, confined to the island of Sakhalin.

Sakhalin, seems to confirm this. CM is no longer applied by most speakers in the expected contexts, which may be a sign of language attrition.

Principles of Consonant Mutation

Table 1 presents the obstruent inventory of the Nivkh language. Note that the voiced trill /r/ and the voiceless trill /r̥/² occupy the slots of dental fricatives. This is because in phonological processes (also other than CM) they behave like fricatives and not like sonorants. The sound /h/, which does not alternate and can be interpreted as an approximant, is also excluded. With these assumptions, the system is very compact and symmetric.

Table 1 Alternating obstruent sets of Nivkh (the West Sakhalin dialect)

I	aspirated plosives	p ^h	t ^h	c ^h	k ^h	q ^h
II	voiceless plosives	p	t	c	k	q
III	voiced fricatives	v	r	z	ʒ	ʁ
IV	voiceless fricatives	f	r̥	s	x	χ
V	voiced plosives	b	d	ɟ	g	ŋ

In this system, set II (voiceless plosives) alternates with set III (voiced fricatives), whereas set I (aspirated plosives) alternates with set IV (voiceless fricatives). The status of voiced plosives (set V) is special; they tend to alternate with sets II and III after sonorants,³ but not consistently (Gruzdeva 1997). They do not occur in initial position in free forms, and some authors do not consider them phonemic (Blevins 1993; Shiraishi 2006). Due to limitations in the database, the present study is restricted to the basic alternation between plosives and fricatives, while the question of plosive voicing will not be discussed.

The plosives (I, II) spirantize to the corresponding homorganic fricatives (IV, III, respectively) in the initial position of a noun which is preceded by an attribute ending in a plosive or a vowel. The following example (1) with the noun *pəŋx* ‘soup’ illustrates the mechanism (cf. Gruzdeva 1997; 1998):

2. In the East Sakhalin dialect the corresponding segment is pronounced as [rʃ] and in the North Sakhalin dialect as [ʃ]. In the examples cited in this paper all three sounds are marked by the sign ʃ. Otherwise, all Nivkh examples are given in IPA transcription.

3. The sonorants (mainly nasals) are preserved in the East Sakhalin dialect but they are lost in the North Sakhalin, West Sakhalin, and Amur dialects, cf. e.g. ‘cup’ *ŋirŋ* (ES) vs. *ŋir* (A).

- (1) Amur dialect
- | | | | | | |
|----|---------------------------------|----|--------------------|----|-------------------------------------|
| a. | <i>cus + pəɲɪx</i> ⁴ | b. | <i>cʰo + vəɲɪx</i> | c. | <i>ova + bəɲɪx</i> (* <i>ovay</i>) |
| | meat + soup | | fish + soup | | flour + soup |
| | ‘meat soup’ | | ‘fish soup’ | | ‘flour soup’ |

Transitive verbs, which typically begin with fricatives, experience the opposite alternation (III, IV to II, I) after direct object when the final segment of the object is a fricative (or, in some cases, a nasal), as in the following (2):

- (2) Amur dialect
- | | | | |
|----|-----------------------|----|-----------------------|
| a. | <i>ɲi arak + ra-ʃ</i> | b. | <i>ɲi cʰax + ta-ʃ</i> |
| | 1SG vodka + drink-IND | | 1SG water + drink-IND |
| | ‘I drink vodka.’ | | ‘I drink water.’ |

These two opposite surface processes can be regarded as manifestations of a single phonological phenomenon (Shiraishi 2006), for they produce similar outcomes, in that sequences of fricatives or plosives are avoided at morpheme boundaries. Their phonological trigger sets are complementary: spirantization applies where hardening does not (after vowels and plosives), and vice versa. Shiraishi (2000) also argues that hardening, which is cross-linguistically infrequent compared to spirantization, is secondary even in Nivkh: the initial fricatives in transitive verbs are a product of lenition triggered by an earlier object prefix (*)*i-*, which is still present in some transitive verbs.

In harmony with these rules, even grammatical suffixes have allomorphs depending on the final segment of the root. The following triplet (3) presents the three forms of the dative suffix:

- (3) Amur dialect
- | | | | | | |
|----|--------------------------|----|-------------------|----|---------------------------------|
| a. | <i>cax-toχ</i> | b. | <i>tu-roχ</i> | c. | <i>mur-doχ</i> (* <i>murɲ</i>) |
| | top-DAT | | lake-DAT | | horse-DAT |
| | ‘to the top (of a tree)’ | | ‘(in)to the lake’ | | ‘to the horse’ |

Likewise, the suffix of the instrumental case also has three morphophonological variants (4):

4 An attribute and a head noun, as well as a primary object and a transitive verb form a synthetic complex (Mattissen 2003) whose parts are separated in the examples by the symbol +.

(4) Amur dialect

- | | | | | | |
|----|-----------------|----|---------------|----|----------------|
| a. | <i>qʰax-kir</i> | b. | <i>mu-γir</i> | c. | <i>laq-xir</i> |
| | spear-INSTR | | boat-INSTR | | ski-INSTR |
| | ‘with a spear’ | | ‘by boat’ | | ‘by ski’ |

Nivkh has fairly rigid constituent order, but because none of the basic syntactic roles are case-marked, CM can be the only overt indicator of the distinction between subject and object when one of them is omitted (5):

(5) East Sakhalin dialect

- | | | | |
|----|---------------------------|----|------------------------------|
| a. | <i>ɛʎly ʀo-d</i> | b. | <i>ɛʎly + tʰo-d</i> |
| | child bring-IND | | child + bring-IND |
| | ‘A child brought (sth.).’ | | ‘(Someone) brought a child.’ |

Observations from the field

During the field work, potential Nivkh speakers were given simple translation tasks from Russian to Nivkh. Six persons, all female, were deemed fluent enough to represent the current state of the language. One of them was surprisingly young, aged 38, and turned out to be an educated Nivkh language teacher. Others had an age range from 55 to 73. Phrases listed above (1–5) comprise the core of the elicited data, but some changes and additions to the examples were applied when needed, for instance, if the speaker did not have the desired lexeme in her active vocabulary. Also, the most fluent speakers were, time permitting, given additional elicitation tasks beyond this basic set.

It quickly became clear that most of the consultants did not apply CM in all expected contexts, or applied it with variation or hesitation. Frequently, they used the citation form (i.e. the plosive-initial form of nouns and the fricative-initial form of transitive verbs) in environments where another variant would have been the norm. Thus, for instance, many of the West Sakhalin dialect speakers translated the example ‘fish soup’ (1b) as *cʰo pəɲx*, while the phrase ‘I drink water’ (2b) was rendered as *ɲi cʰax ra-ʃ*.

In many cases, the consultants mentioned right away both an alternating and a non-alternating variant (i.e. *cʰo pəɲx* ~ *cʰo + vəɲx*) or otherwise indicated indifference with respect to the quality of the potentially alternating consonant. This happened especially with the attribute + noun construction, and it cannot be explained solely by assuming that the speaker was correcting herself, as the same happened also the other way round (with the “correct” version coming first).

Also, even those who did not use the alternate form at all accepted it when asked about its grammaticality.

One of the speakers could, in elicitation, produce the sentence ‘I killed a bear’ (6a), with the expected initial plosive in the predicate verb *-k^hu-ʃ* ‘killed’. With other objects, however, she did not use either this or the unmarked fricative-initial variant but instead made use of the free form *i-ʃ-ʃ* ‘killed’ (6b), which is ungrammatical with an overt object. The reason for this could be that she had essentially forgotten how to use this particular verb productively but the phrase ‘to kill a bear’, reflecting a common scenario in Nivkh traditional culture, was something she had memorized as a fixed expression.

(6) West Sakhalin dialect

- | | |
|--|--|
| <p>a. <i>ni q^hotr + k^hu-ʃ</i>
 1SG bear + kill-IND
 ‘I killed a bear.’</p> | <p>b. <i>ni ŋa i-ʃ-ʃ</i>
 1SG animal 3SG-kill-IND
 ‘I killed an animal.’</p> |
|--|--|

None of the speakers deviated from the expected allomorphy in the case of dative endings (3). With the instrumental, two of them used the form *q^hax-ʃir* ‘with a spear’ instead of *q^hax-kir* (4a). Even though “wrong” allomorphy cannot change the meaning of the utterance here, it seems that case suffixes alternate clearly more consistently than independent words. Case suffixes also do not have any citation form which speakers could use as a default.

Table 2 summarizes the results for the three basic CM contexts: attribute + head noun, primary object + verb, and case suffixes (dative and instrumental). Because the elicited material was not exactly identical for all speakers, we considered it sufficient to document whether a speaker (year of birth indicated in the table) applied CM in all appropriate contexts, in some of them or with hesitation, or not at all. As we can see, only one of the speakers produced the alternations systematically according to the traditional description in all elicited phrases.

Table 2 Realization of consonant alternations by different speakers

	ATTR+N	PO+V	case suffix
Female (1941)	some	none	all
Female (1943)	some	some	all
Female (1946)	all	all	all
Female (1957)	all	some	all
Female (1959)	some	some	some
Female (1975)	none	some	some

Summary and discussion

With a sample size this small, it is of course not possible to draw any statistically reliable sociolinguistic conclusions. Even so, it may be seen that the application of CM has clearly become unpredictable at least at word boundaries. Attrition due to language obsolescence is one possible factor underlying this development. There is evidence of analogous phonological attrition in Celtic languages, which have similar, though phonologically even less transparent, alternation patterns (Dorian 1981; Thomas & Gathercole 2005).

When studying a phenomenon like CM, it is often wise not to rely too blindly on old transcribed materials, as linguists might have simplified and idealized the natural variation of language to fit their models. The problem is that virtually all voice recordings of Nivkh have been collected after the large-scale contact with Russian had already started. This makes its effect on CM hard to determine precisely. It is known that a small language community, lacking a prestige norm for their language, tends to exhibit wide sociolinguistic and idiolectal variation (Dorian 1994). Unnaturalness of elicitation in a speech situation may also be a contributing factor. A more comprehensive synchronic study could possibly reveal some other tendencies concerning Consonant Mutation in Nivkh.⁵

3. KINSHIP TERMINOLOGY

Different kinship terminologies have had a major role in anthropological studies since the nineteenth century, when the idea of “kinship” as an anthropological concept was born (Trautmann 2000: 559). According to Lewis H. Morgan (1871) kinship terminologies resist changes better and are more conservative than the general vocabulary and grammar of a language.

However, as the Nivkh kinship terminology is deeply rooted in the traditional inter-clan group marriage practice (Shternberg 1999: 13), which seems to have started to decline in popularity already in the latter half of the nineteenth century (Shternberg 1999: 85–86), its status as a part of the modern Nivkh core lexicon may not be as firmly established as is the case with the kinship terminologies in some other languages.

⁵ The variation of Consonant Mutation in Nivkh and possible explanations of this variation have been thoroughly examined in Juha Luukkonen’s MA thesis (Luukkonen 2015).

Nivkh kinship system and terminology

The most extensive data on the Nivkh kinship system, family structure, and marriage practices was collected by Lev Shternberg (1933; 1999) at the end of the nineteenth century on Sakhalin Island. This data was later checked and supplemented by Erukhim A. Kreinovich (1973).

The Nivkh kinship terminology reflects the complicated system of sexual norms and marriage practices that existed in the Nivkh society until the beginning of the twentieth century. Traditionally, the Nivkh lived in exogamic clans based on the agnatic principle. According to Nivkh marriage laws, every Nivkh clan was connected with at least two other clans related to it by blood: the clan from which it took its wives, and the clan into which it had to give its own women in marriage (Shternberg 1999: 79). As a result, the Nivkh kinship system has no separate terms for relationship by marriage (affinity), but uses only terms for blood relationship (consanguinity), because affinity coincided with kin ties. A member of a clan that took wives was identified by the generic term *omyi* (A, ES) ‘son-in-law’, whereas a member of a clan from which wives were taken was called *axmalk* (A), *aymalʔ* (ES) ‘father-in-law’.

According to Shternberg (1999: 14), the Nivkh used to distinguish two main categories of kinship: (i) agnatic kinship, comprising all persons descended from a common male ancestor and therefore belonging to the same patrilineal clan, which was called *qʰal* (A), *qʰalʔ* (ES); and (ii) cognatic kinship, comprising: (a) the clan(s) into which the kinswomen of a given clan were married, as well as (b) the clan(s) from which the men of the same clan had taken wives.

Both agnatic and cognatic kinship distinguished three generational lines: (a) one’s own generation, (b) the ascending generation, and (c) the descending generation (Shternberg 1999: 15–20). All males and females of one’s own generation from the same clan, including one’s own brothers and sisters, as well as the children of one’s father’s brothers and one’s mother’s sisters, could be referred to by the same term *ruv* (A), *ruvʔ* (ES).⁶ Further distinctions within this generation were based on the age and sex of the relative. Within the ascending generation one could distinguish (a) the class of grandparents and (b) the class of parents. In both classes there were separate terms for males and females. For the descending generation there was basically only one term meaning ‘child’.

Table 3 summarizes basic kinship terms and shows that many of them could be used both for agnatic and cognatic kinship. Some specific cognatic terms not

⁶ Note that both in Shternberg (1999: 16) and Kreinovich (1973: 262) this term is given as *tuvy*, which is the original etymologically correct unbound shape of the word.

mentioned in the table include *amnej* (ES) ‘wife’ and *amr* (A), *joχ* (ES) ‘younger brother’s wife’. In the Amur dialect ‘wife’ was called *umgu*, which literally means ‘woman’. In both dialects the expression ‘man’, that is, *utku* (A) and *azmɔc* (ES), was used for designating one’s husband. When used as kinship terms, these words were combined with possessive prefixes.

Table 3 Nivkh kinship terms⁷

Amur	East Sakhalin	
<i>əkən</i>	<i>akan, akand</i>	‘older brother’
<i>nanak</i>	<i>nank, nanx</i>	‘older sister, paternal aunt’
<i>acik</i>	<i>asq, asqad, asqand</i>	‘younger brother or sister’
<i>kiun</i>		‘brother in relation to sister’
<i>ranr</i>		‘sister in relation to brother’
<i>atak</i>	<i>atk, atkɛcx</i>	‘all males in the ascending lines of one’s father and mother, i.e. grandfather, great-grandfather, grand-uncle, great-grand-uncle, etc.’
<i>acik</i>	<i>acik, ack, acm, acmam</i>	‘all females in the ascending lines of one’s father and mother, i.e. grandmother, great-grandmother, grand-aunt, great-grand-aunt, etc.’
<i>atək</i>	<i>ətək</i>	‘father, father’s brother, mother’s sister’s husband, mother’s sister’s husband’s brother, etc.’
<i>amək</i>	<i>əmək</i>	‘mother, mother’s sister, father’s brother’s wife, father’s brother’s sister, etc.’
<i>ovla</i>	<i>evlɥ</i>	‘son, daughter, nephew, niece, grandson, grand-daughter etc.’

Observations from the field

The data for this study was gathered through short interviews and a simple elicitation task from 15 ethnic Nivkh, whose years of birth ranged from 1943 to 1975.⁸ As the consultants were mainly chosen based on their ethnicity rather than fluency in the language, their proficiency in the ethnic language varied a lot: one consultant had formal education as a teacher of the Nivkh language, whereas

⁷ The data on kinship terms is quoted from Shternberg (1999), Kreinovich (1973), Savel’eva & Taksami (1970), Taksami (1983), and Gruzdeva (fieldnotes).

⁸ More data about the consultants’ language background was obtained through a sociolinguistic study conducted during the same trip by other members of the expedition.

most others had actually not used the language at all, or had stopped using it actively after early childhood.

The elicitation task was based on a model of a family tree designed for this study with consideration of the features of Nivkh kinship terminology, as presented in Shternberg (1999). Only a limited amount of time was available for the work with each consultant. The number of relatives portrayed in the family tree was 38 (including ego). These were later divided into the following six groups to help the analysis of the collected data:

Table 4 Division of the relatives appearing in the family tree

1A.	[Speaker's] parents and grandparents
1B.	[Speaker's] siblings and their spouses and children
2A.	[Speaker's] spouse
2B.	[Speaker's] children and grandchildren
3A.	[Speaker's] spouse's parents and grandparents
3B.	[Speaker's] spouse's siblings, their spouses and children

The consultants could on average name relatives from 3.4 terminological groups, and the average amount of known kinship terms was 11.3. Six consultants (out of 15) were clearly unfamiliar with the terminology: they knew only one to five terms and/or could not name any relatives depicted in the family tree.

The best known terminology was related to the agnatic terms, that is, to the speaker's parents, grandparents, children, and grandchildren. The terms referring to the speaker's own parents and children were more often known than the ones referring to grandparents or grandchildren. These results are not surprising as most consultants had only used Nivkh in their early childhood when communicating with their parents or grandparents. Seven consultants told that both their parents had spoken Nivkh at least to some extent. Some, however, mentioned their parents or grandparents using Nivkh only with each other but changing to Russian when speaking to the children. Two consultants mentioned that they had used Nivkh exclusively when talking with their mothers.

It seems that most of the consultants were able to name the terms that they themselves had used or heard being used by other speakers. One consultant was able to name most of the terms from groups 1A, 1B, and 2B, but could not remember the term for 'grandfather', as both her grandfathers had passed away at an early age. Another consultant filled in most of the family tree but could not recall the terms for 'husband's brother' or 'son-in-law', as her own husband did not have a brother and she herself did not have a daughter.

The consultants may be divided into age groups by the decade in which they were born. Five consultants were born in the 1940s, three in the 1950s, four in the 1960s, and three in the 1970s. Even though the database is too small for any definitive conclusions, it was evident that most of the consultants born in the 1940s were clearly more familiar with the traditional kinship terminology than those in the younger age groups. The average amount of terms named was lowest in the group consisting of consultants born in the 1960s. The consultants born in the 1940s and 1950s remembered on average 18.4 and 11 kinship terms, respectively, while those born in the 1960s remembered only 2.75. Surprisingly, the number of terms named by the consultants born in the 1970s was the second highest, averaging 11.3. This was mainly due to the fact that the Nivkh language teacher was in this group: her score was 25, which was in the same class as the highest scores in the oldest age group, while the others in her own age group had much lower scores.

It may be mentioned that one consultant provided, as it seemed, innovative terms for 'grandmother' and 'grandfather', based on the reduplication of the terms for 'mother' and 'father', respectively. However, since no other consultant mentioned reduplicated terms of this type, and since they are also absent in published materials, such as those of Shternberg (1999), it seems safe to assume that they are not commonly used by the Nivkh. For this reason, they were not included in the final results.

Summary and discussion

Knowledge of the traditional Nivkh kinship terminology among the consultants who participated in the survey ranged from no familiarity at all (0 terms known) to a rather extensive awareness of the terminology (over 20 terms), in the latter case also covering several terms for the relatives of one's spouse. As kinship terminology is closely related to traditional marriage customs, which became obsolete several decades ago, it is not surprising that the older consultants were able to name more terms than the younger ones.

It goes without saying that any knowledge of kinship terminology is directly connected with linguistic proficiency, in that a fluent speaker will also be more familiar with kinship terms than a person having only a rudimentary command of the language. Among the consultants surveyed there were only three who may be regarded as more or less fluent speakers of Nivkh. One of them (born in the 1950s) was still using Nivkh as a language for daily communication when speaking with her relatives, while another one had written for a Nivkh newspaper during the 1990s. The third one was the Nivkh teacher, though her profi-

ciency in Nivkh was partly acquired through professional education. Most of the consultants did not use, and had never used, Nivkh for any kind of communication, though many of them expressed an interest in the language and its future.

However, kinship terminology is one of the areas of the lexicon that can be transmitted and used even without an actual knowledge of the language. At the same time, kinship terminology is linked to the underlying kinship system. Besides conforming with the overall attrition of the Nivkh language, the decline of kinship terminology among the Nivkh can also be seen as a result of the changes that have taken place in the marriage customs and family life, in general. The traditional terminology does not reflect the current social organization of the Nivkh. The older consultants, who knew the kinship terms relatively well, were also familiar with the traditional marriage practices. Therefore it could be argued that the decline in the field of kinship terminology reflects the increasing alienation of the Nivkh from their traditional culture.

4. NUMERAL CLASSIFIERS

Nivkh has a large set of mainly autochthonous cardinal numerals, with which it is possible to indicate any number at least up to one million. A cardinal numeral consists of either a “plain” numeral morpheme or a numeral morpheme and a classifier. The numeral morpheme indicates the number of items being counted, while the classifier indicates their semantic class, such as animacy, shape, or function. Only numerals from one through five obligatorily occur with classifiers, while numerals from six to nine and multiples of ten can be used either with or without classifiers. Classifiers are not attested with multiples of 100 and 1,000, or with the numeral for one million (expressed as 1,000 x 1,000). Every classifier has several variants with different phonological shapes, while the numeral morphemes can also have allomorphs. The choice of the numeral allomorph in the cardinal numeral depends on the phonological shape of the classifier.

Already in the first third of the twentieth century researchers pointed out that the younger generation of Nivkh speakers was losing the knowledge of the numeral system. Kreinovich, who studied the Nivkh system of numerals and classifiers in detail (Kreinovich 1932b), noted (1932b: 12) that some numerals included in his list had fallen into disuse among younger speakers, who often replaced them with the corresponding numerals containing a generic classifier. The contemporary fieldwork data quoted below demonstrates that most of the original numerals are today completely obsolete.

The system of numeral classifiers

The original system of numeral classifiers, which still existed in Nivkh some seventy years ago, comprised altogether at least 33 classifiers (Kreinovich 1932b; Panfilov 1962: 172–221; Gruzdeva 2004). Table 5 summarizes the original cardinal numerals from ‘one’ through ‘five’ and ‘ten’.

Table 5 Cardinal numerals in the East Sakhalin dialect (Gruzdeva 2015a: 167)

class	objects being counted	‘one’	‘two’	‘three’	‘four’	‘five’	‘ten’
1	sledges	<i>ɲiř</i>	<i>miř</i>	<i>ceř</i>	<i>nəř</i>	<i>thoř</i>	<i>mxoɲ</i>
2	boats	<i>ɲim</i>	<i>mim</i>	<i>cem</i>	<i>nəm</i>	<i>thom</i>	<i>mxoɲ</i>
3	fishnet cells	<i>ɲiu</i>	<i>miu</i>	<i>ceu</i>	<i>nuu</i>	<i>thou</i>	<i>mxou</i>
4	fishnet strips	<i>ɲeřqe</i>	<i>meřqe</i>	<i>ceřqe</i>	<i>nəřqe</i>	<i>thořqe</i>	?
5	fishnets and fish-spears	<i>ɲvor</i>	<i>mevor</i>	<i>cfor</i>	<i>nvur</i>	<i>thovor</i>	<i>mxovor</i>
6	special fishnets	<i>ɲeo</i>	<i>meo</i>	<i>ceo</i>	<i>nəu</i>	<i>thou</i>	<i>mxou</i>
7	poles for making fish-spears	<i>ɲla</i>	<i>mel</i>	<i>cla</i>	<i>nly</i>	<i>thola</i>	<i>mxola</i>
8	poles for drying fish	<i>ɲesk</i>	<i>mesk</i>	<i>cesk</i>	<i>nask</i>	<i>thosk</i>	?
9	boards for building boats	<i>ɲec</i>	<i>mec</i>	<i>cec</i>	<i>nəc</i>	<i>thoc</i>	<i>mxoec</i>
10	families	<i>ɲiřn</i>	<i>miřn</i>	<i>ceřn</i>	<i>nəřn</i>	<i>thořn</i>	<i>mxoɲiřn</i>
11	generations	<i>ɲesvax</i>	<i>mesvax</i>	<i>cesvax</i>	<i>nəsvax</i>	<i>thosvax</i>	?
12	places	<i>ɲavř</i>	<i>mevř</i>	<i>cavř</i>	<i>nəvř</i>	<i>thovř</i>	<i>mxovř</i>
13	day’s rests on one’s way	<i>ɲix</i>	<i>mix</i>	<i>cex</i>	<i>nəx</i>	<i>thox</i>	?
14	humans	<i>ɲenɲ</i>	<i>menɲ</i>	<i>caqř</i>	<i>nəɲɲ</i>	<i>thoɲɲ</i>	
15	non-humans	<i>ɲan</i>	<i>mař</i>	<i>caqř</i>	<i>nuř</i>	<i>thoř</i>	
16	fish						<i>mxos</i>
17	non-fish						<i>mxoɲ</i>
18	paired objects	<i>ɲvazř</i>	<i>mevzř</i>	<i>cfazř</i>	<i>nvəzř</i>	<i>thovazř</i>	<i>mxovazř</i>
19	one-dimensional objects	<i>ɲex</i>	<i>mex</i>	<i>cex</i>	<i>nux</i>	<i>thox</i>	<i>mxox</i>
20	two-dimensional objects	<i>ɲraχ</i>	<i>meraχ</i>	<i>craχ</i>	<i>nrəχ</i>	<i>thoraχ</i>	<i>mxoraχ</i>
21	three-dimensional objects, days	<i>ɲik</i>	<i>mik</i>	<i>ceχ</i>	<i>nəχ</i>	<i>thox</i>	<i>mxox</i>
22	generic	<i>ɲaqř</i>	<i>meqř</i>	<i>caqř</i>	<i>nəkř</i>	<i>thoqř</i>	<i>mxoqř</i>

class	objects being counted	'one'	'two'	'three'	'four'	'five'	'ten'
23	special twigs with dried smelt	<i>ɲɔs</i>	<i>mɛɔs</i>	<i>cɔs</i>	<i>nɛs</i>	<i>thɔs</i>	<i>mɔs</i>
24	twigs with dried smelt	<i>ɲɲaɔ</i>	<i>mɛɲaɔ</i>	<i>cɲaɔ</i>	<i>nɲaɔ</i>	<i>thɔɲaɔ</i>	<i>mɔɲaɔ</i>
25	bundles of slices of dried salmon	<i>ɲar</i>	<i>mer</i>	<i>car</i>	<i>nər</i>	<i>thor</i>	<i>mɔr</i>
26	bundles of dried smelt	<i>ɲɲaɔ</i>	<i>mɛɲaɔ</i>	<i>cɲaɔ</i>	<i>nurɲaɔ</i>	<i>thorɲaɔ</i>	?
27	bundles of dog's meal	<i>ɲɲuvi</i>	<i>miɲvi</i>	<i>cɛɲvi</i>	<i>nurɲvi</i>	<i>thoyvi</i>	<i>mɔɲuvi</i>
28	bundles of dried grass	<i>ɲarvs</i>	<i>mervs</i>	<i>carvs</i>	<i>nərvs</i>	<i>thorvs</i>	?
29	cords of hooks	<i>ɲfat</i>	<i>mefat</i>	<i>cfat</i>	<i>nfət</i>	<i>thofat</i>	<i>mɔfat</i>
30	fingers, as a measure of thickness	<i>ɲiux</i>	<i>miux</i>	<i>ceox</i>	<i>nəux</i>	<i>thos</i>	?
31	quarters (≈ 0.18 metres)	<i>ɲma</i>	<i>mema</i>	<i>cma</i>	<i>nəma</i>	<i>thoma</i>	<i>mɔma</i>
32	fathoms (≈ 2.13 metres)	<i>ɲa</i>	<i>me</i>	<i>ca</i>	<i>nə</i>	<i>tho</i>	<i>mɔa</i>
33	strands of cord	<i>ɲlaj</i>	<i>melaj</i>	<i>claj</i>	<i>nləj</i>	<i>tholaj</i>	<i>mɔlaj</i>

The primary distinction in the original system of numeral classifiers in Nivkh was between (a) sortal and (b) mensural classifiers. Sortal classifiers divide nouns into different semantic classes, while mensural numeral classifiers provide nouns with low countability a unit of measure by which they may be counted. Nivkh sortal classifiers were divided into three groups, according to their specificity: (i) specific sortal classifiers, (ii) categoric sortal classifiers, and (iii) a generic sortal classifier. Specific sortal classifiers [1–12 in the table] were used in enumerating specific, culturally important objects. Categoric sortal classifiers [14–21] referred to a category of an object. The semantic oppositions for categoric sortal classifiers included animacy (animate vs. inanimate), humanity (human vs. non-human), 'fishness' (fish vs. non-fish), ability to form a pair (paired vs. non-paired), and dimensionality (one-dimensional vs. two-dimensional vs. three-dimensional). The generic sortal classifier [22] was used for counting objects that do not belong to any other category.

Example (7) from an old textbook of Nivkh by Kreinovich (1932a) illustrates the elaborate use of specific and categoric sortal classifiers in a text:

(7) Amur dialect (Kreinovich 1932a: 42)

<i>c'ola + ɲivx</i>	<i>ɲi-n</i>	<i>cesq</i>	<i>ɲe-o-gir</i>
be.poor + person	one-CL:HUMAN	fishnet	one-CL:FISHNET-INSTR

c^ho + ηey-ʃ *kala + muyv* *yi-x* *mu-yir*
 fish + look.for-IND be.long + day one-CL:DAY'S.REST boat-INSTR

vi-r *cesq + ju-ʃ* *c^ho*
 go-CONV:MAN:3SG fishnet + exam-IND fish

co-r + vark + k^hu-ʃ
 three-CL:NON-HUMAN + only + kill-IND

‘A poor person catches fish with a fishnet. All day long he rows a boat and examines the fishnet. He catches only three fish.’

In example (7), there are numerals with two specific and two categoric sortal classifiers. The category of *cesq* ‘fishnet’ is counted with *-o*, a specific classifier for fishnets for fishing hunchback and Siberian salmon [6]. The category of *muyv* ‘day’ is counted with a specific temporal classifier *-x*, used for counting a day’s rest on one’s way [13]. The category of *juvx* ‘person’ is counted with *-n*, a categoric classifier for humans [14], while the category of *c^ho* ‘fish’ is counted with *-r*, a categoric classifier for non-humans [15], which is used for counting fish with numerals lower than ten.

Mensural classifiers were divided into two classes: quantitative [23–29] and extensional [30–33]. Quantitative mensural classifiers were used to describe quantities of objects, such as bundles of dried salmon in (8), while extensional mensural classifiers corresponded to the old Russian units of measurement that specify the extension of an object, such as fathoms (*sazhens*, approximately 2.13 metres) in (9):

(8) East Sakhalin dialect, Amur dialect (Gruzdeva 2004: 309)

ma *ηax-ar*
 pair.of.slices.of.dried.salmon six-CL:BUNDLE.OF.DRIED.SALMON

‘six bundles of dried salmon’

(9) East Sakhalin dialect (Shternberg 1908: 35)

kalaf-tox *min-a-ra*
 length-DAT eight-CL:FATHOM-FOC

‘eight fathoms by length’

Earlier studies of Nivkh language attrition (Gruzdeva 2002; 2015a) note that due to the general obsolescence of Nivkh, the original classifier system has become radically reduced in the language of modern speakers. The mensural classifiers and specific sortal classifiers are almost completely out of use, and only categoric

classifiers referring to humans [14], non-humans [15], non-fish [17], one-dimensional objects [19], three-dimensional objects [21], and other objects [22] are still remembered by the speakers.

Observations from the field

From the interviews conducted with the speakers of the West Sakhalin and North Sakhalin dialects, it may be concluded that modern Nivkh speakers still remember sporadic examples of different specific and categoric classifiers, but the generic classifier has in most cases replaced all other classifiers with a more specific meaning.

As expected, it turned out that the consultants did not remember most of the mensural classifiers. The only example supposedly containing a mensural classifier that one of the consultants was able to remember was *ɣuvi* ‘one bundle of dog’s meal’. However, this form with an initial velar nasal *ɣ* has a phonological shape different from the original numeral *ɣɣuvi* [27], which has an initial consonant cluster with the palatal nasal *ɣ* and the velar fricative *ɣ*.

Specific sortal classifiers were not in active use either, but the speakers were still able to remember some examples of them. The specific sortal classifiers still recognized by at least some modern speakers are classifiers referring to sledges [1], as in example (10), fishnets [5], fishnets for fishing hunchback and Siberian salmon [6], and families [10], as in example (11):

(10) North Sakhalin dialect

tʃu *ɣi-ř*
sledge one-CL:SLEDGE

‘one sledge’

(11) West Sakhalin dialect

<i>ɣi-zcu</i> ⁹	<i>mi-zcu</i>	<i>ce-zcu</i>
one-CL:FAMILY	two-CL:FAMILY	three-CL:FAMILY
<i>nə-zcu</i>	<i>tʃo-zcu</i>	
four-CL:FAMILY	five-CL:FAMILY	

Categoric sortal classifiers that the modern Nivkh speakers were still able to recognize included classifiers referring to humans [14], as in (12), non-humans

⁹ Note that instead of the classifier *-řn*, [10] in Table 5, as used in the East Sakhalin dialect, the Amur dialect, to which the West Sakhalin dialect closely adheres, uses the classifier *-zcu* for count-

[15], paired objects [18], one-dimensional objects [19], as in (13), and three-dimensional objects [21]:

(12) West Sakhalin dialect

<i>ni-n ~ ne-n</i>	<i>me-n</i>	<i>ca-qř</i> ¹⁰
one-CL:HUMAN	two-CL:HUMAN	three-CL:GENERIC
<i>nə-r</i>	<i>t^ho-r</i>	
four-CL:HUMAN	five-CL:HUMAN	

(13) North Sakhalin dialect

coŋř + ŋəvřki ne-x
 head + fur one-CL:ONE.DIMENSIONAL
 ‘one strand of hair’

As has already been noted, the generic sortal classifier [22], referring to objects that do not belong to any other class, is still widely used among the modern speakers:

(14) North Sakhalin dialect

coŋř na-qř
 head one-CL:GENERIC
 ‘one head’

In addition to the decrease of the number of classifiers that modern Nivkh speakers are still able to recognize, the linguistic consequences of language attrition also involve changes in the phonological shape and sphere of usage of numeral classifiers, as well as in the morphosyntactic structure of the noun phrase modified by a cardinal numeral. The fieldwork sessions showed that even when the speakers were able to remember a specific or categoric classifier during the elicitation of numeral paradigms, they often substituted it with a generic classifier when using the classifier with a noun or making a sentence.

As can be seen from example (15a), the consultant remembered the numerals with classifiers for animate non-human entities (*-n/-r*),¹¹ but nevertheless used the generic classifier for counting dogs in the sentence (15b).

ing families.

¹⁰ The classifier for ‘persons’ has two different forms, *-n* for ‘one’ and ‘two’ and *-r* for ‘four’ and ‘five’. For ‘three persons’, however, only the generic classifier *-qř* is attested.

¹¹ Note that in the Amur and North Sakhalin dialects the numerals with the classifier for non-

(15) North Sakhalin dialect

- a. *nə-n* *mo-r* *co-r*
 one-CL:NON.HUMAN two-CL:NON.HUMAN three-CL:NON.HUMAN
- mu-r* *tʰo-r*
 four-CL:NON.HUMAN five-CL:NON.HUMAN
- b. *n-ux* *qany* *na-qř*
 1SG-ABL dog one-CL:GENERIC

'I have one dog.'

The category of *ciyr* 'tree' belongs to the class of one-dimensional objects and is originally counted with the classifier *-x* for one-dimensional objects [19]. Although the consultant was able to remember this classifier, she used the generic classifier [22] in the phrase 'one tree', cf. (16):

(16) North Sakhalin dialect

- ciyr* *na-qř*
 tree one-CL:GENERIC

'one tree'

During the field work it was also obvious that the speakers often remembered only some particular numerals (usually 'one' and 'two') belonging to classes other than generic, but they did not remember the complete numeral paradigm. Specific and categoric classifiers were rarely used with numerals higher than 'two'. In (17), the speaker uses the classifier for three-dimensional objects with numerals 'one' and 'two' when counting berries, but starting with the numeral 'three' she switches to the generic classifier:

(17) North Sakhalin dialect

- a. *als* *ni-k*
 berry one-CL:THREE.DIMENSIONAL
 'one berry'
- b. *als* *mi-k*
 berry two-CL:THREE.DIMENSIONAL
 'two berries'

humans, [15] in Table 5, are pronounced differently from those in the East Sakhalin dialect.

- c. *als ca-qř*
 berry three-CL:GENERIC
 ‘three berries’

The Nivkh speakers interviewed for this paper commented that although they can remember some particular numerals with specific or categoric classifiers, these numerals are usually not used when they speak the language. The only classifiers that are still commonly used are the classifier for humans [14] and the generic classifier [22].

Example (18) illustrates how the use of the generic classifier instead of a specific one can be accompanied with word order change in the noun phrase with a cardinal numeral:

(18) North Sakhalin dialect

- a. *t^hu ʝi-ř*
 sledge one-CL:SLEDGES
 ‘one sledge’
- b. *t^hu me-qř*
 sledge two-CL:GENERIC
 ‘two sledges’
- c. *t^hu ca-qř*
 sledge three-CL:GENERIC
 ‘three sledges’
- d. *nə-kř t^hu*
 four-CL:GENERIC sledge
 ‘four sledges’
- e. *t^ho-qř t^hu*
 five-CL:GENERIC sledge
 ‘five sledges’

Sledges were originally counted with the specific classifier *-ř* [1]. Regarding the original order of the numeral and the noun, the numerals up to ‘five’, which obligatorily take a classifier, follow the noun, while the numerals over ‘five’ directly precede it. When counting sledges, the speaker uses the specific classifier

-ř and the original word order with the numeral ‘one’ (18a). With the numerals from ‘two’ to ‘five’, she starts using the generic classifier instead of the specific one (18b–e). While with the numerals from ‘one’ through ‘three’ (18a–c) the word order remains noun-numeral, with the numerals ‘four’ and ‘five’ the speaker changes the word order to numeral-noun (18d–e).

Finally, the data considered for this paper contains one example where the speaker uses two classifiers within one numeral (19).

(19) North Sakhalin dialect

<i>ne-o</i>	<i>me-o</i>	<i>ce-o</i>
one-CL:FISHNETS	two-CL:FISHNETS	three-CL:FISHNETS
<i>ɲə-kr-o</i>	<i>tho-qr-o</i>	
four-CL:GENERIC-CL:FISHNETS	five-CL:GENERIC-CL:FISHNETS	

When counting fishnets for fishing hunchback and Siberian salmon, the consultant uses the specific classifier *-o* with the numerals from ‘one’ through ‘three’. However, with the numerals ‘four’ and ‘five’ she uses a combination of the generic classifier *-kr-/-qr-* and the specific classifier *-o* within the same numeral.¹² Earlier, it has been assumed that in Nivkh “a combination of two or more classifiers within one non-complex numeral is impossible” (Gruzdeva 2004: 301). Nevertheless, such a combination is attested in (19). Apparently, the speaker remembers only the first three items of the set and cannot derive the correct forms for the others. The numerals containing the generic classifier have become lexicalized as indivisible entities, to which additional classifiers can be added.

Summary and discussion

To conclude, Nivkh is on its way towards the replacement of all the specific and categoric classifiers by the generic one. Although it is possible to elicit some particular numerals with specific and categoric classifiers from the modern speakers, they are usually restricted to numerals lower than ‘three’ and are rarely used in actual speech, even in simple sentences. In addition to the radical reduction of the system of numeral classifiers, the effects of language attrition can be seen in occasional variation in the phonological shape of the numerals, as well as in changes of the word order in phrases containing a numeral. The data also

¹² Note that the correct phonological shape of the classifier for fishnets with the numerals ‘four’ and ‘five’ would be *-u*.

includes an example where a speaker used a combination of two classifiers within the same non-complex numeral.

It has to be added that many of the original numerals have also lost their cultural significance due to the acculturation of the Nivkh and the loss of the traditional subsistence patterns and social structures. For instance, with the adoption of commercial fishing gear, the numerals for different types and parts of 'nets' [3–6] have largely lost their relevance. The same is true of the old units of measurement [30–32]. Likewise, it is no longer relevant to count the number of 'day's rests' when travelling [13]. Counting 'boards for building boats' [9] or 'bundles of dried grass' (to be used inside boots instead of socks) [28] has also become unnecessary due to the availability of industrially made equipment.

5. CONCLUSION

In this paper, three sets of data illustrating the process of Nivkh language attrition have been presented.

First, it has been shown that in contemporary Nivkh the system of consonant alternations has been basically maintained at the boundaries of grammatical morphemes but has partly collapsed at the boundaries of words. In the speech of modern speakers, the initial consonants of head nouns and verbs either do not alternate at all or alternate irregularly. The language is therefore losing one of its most important typological properties and a crucial device for marking (poly-) synthetic complexes. This may result in a radical change of the syntactic structure of the Nivkh nominal and verbal phrases.

Second, the paper has demonstrated that an essential part of traditional kinship terminology has become obsolete and is unknown to the younger generation of the Nivkh. Unlike the loss of consonant mutations, which may be considered as a purely linguistic phenomenon, the decay of kinship terminology should primarily be attributed to extralinguistic factors, such as radical changes in the Nivkh social structure and traditional marriage practices. In the situation of the almost full adaptation of the Nivkh to the dominant Russian lifestyle, there is no longer need for the old kinship terms, which reflect obsolete social patterns and are no longer relevant for the modern Nivkh family and society.

Finally, we have seen that in the speech of modern speakers the original complex system of Nivkh numerals comprising different types of classifiers has been almost completely reduced to a system without classifiers, reminiscent of the one attested in Russian. The generic classifier that is nowadays used for counting all types of objects has been reanalyzed as an integral part of a numeral stem and is synchronically inseparable from the numeral morpheme. Such a

radical reduction of the system of numeral classifiers can be explained by at least two factors. On the one hand, the system has been shaken by changes in Nivkh material and social culture. During the last hundred years many salient everyday objects that were counted with specific classifiers have fallen into disuse. The loss of these objects naturally resulted in the loss of the corresponding classifiers. On the other hand, most contemporary speakers of Nivkh have received their school education, including their knowledge of mathematics, in Russian and prefer to use Russian numerals even when communicating in Nivkh. This has naturally contributed to the decay of the original numeral system with classifiers.

Summarizing all the facts presented above, we may conclude that Nivkh is following the same path as many other obsolescent languages – it is losing its original complexity in the most elaborate parts of morphophonology, morphology, syntax, and lexicon, which due to their very specificity have become the weakest parts of a rapidly decaying language.

ABBREVIATIONS

A	Amur dialect		
ES	East Sakhalin dialect		
NS	North Sakhalin dialect		
WS	West Sakhalin dialect		
1	first person	FOC	focus
3	third person	IND	indicative
ABL	ablative	INSTR	instrumental
ATTR	attribute	MAN	manner
CL	classifier	N	noun
CM	consonant mutation	PO	primary object
CONV	converb	V	verb
DAT	dative		

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