# University of Groningen

## Topics in Nivkh phonology

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*Document Version*
Publisher's PDF, also known as Version of record

*Publication date:*
2006

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*
Shiraishi, H. (2006). *Topics in Nivkh phonology* s.n.

# Chapter 1

# Introduction

This thesis has two aims. One is to show how the latest findings of current phonological theories facilitate the statement of generalizations underlying the phonological structure of Nivkh, a relatively unknown language of Northeast Asia. The other aim is to describe the phonology of a hitherto undocumented dialect of Nivkh (West-Sakhalin dialect, henceforth WSN), using data which I collected in a number of fieldwork trips. At the same time, I will demonstrate in the discussions how such newly collected data contribute to a better understanding of various phonological phenomena in Nivkh.

Nivkh (also called Gilyak) is a language isolate (or microfamily) spoken on the island of Sakhalin and on the lower reaches of the Amur River in the Russian Far East (map 1, 2). From the middle of the 19th century on, Nivkh was classified as a Paleosiberian (or Paleoasiatic) language together with languages such as Ket, Yukaghir, Itelmen, Chukchi and Koryak. However, these languages are not genetically related to each other (except for Chukchi, Koryak and Itelmen, which form the Chukchi-Kamchatkan language family). Neither is Nivkh related to geographically neighboring languages such as Ainu or any of the Tungusic languages (Uilta, Nanai etc.). The resemblances with Japanese (word order, heavy inflection of verbs) are all of a typological nature (Austerlitz 1974).

The thesis consists of descriptive and theoretical parts. The descriptive parts are Chapter 2 and the introductory sections of Chapter 3 and 4. These parts aim to familiarize the reader with the basic phonology of Nivkh, and to provide background information in order to discuss the phonological issues in Chapter 3 and 4. In these descriptive sections, special emphasis is put on i) those aspects of Nivkh phonology which have been hitherto unknown, and ii) those characteristics in which WSN deviates from other dialects of Nivkh.

Chapters 3 and 4 discuss two phonological topics: Chapter 3 deals with laryngeal phonology and Chapter 4 with Consonant Mutation.[1] In these chapters I will first give a descriptive sketch of the issues and review the way previous works dealt with them. For both issues, I propose alternative approaches and show how the proposed analyses succeed in describing complicated phonology on the surface from a restricted number of phonological principles and generalizations.

The two topics, laryngeal phonology and lenition, have received a lot of attention in current theories of phonology. The discussions in the last decade have led to substantial progress in understanding these phenomena. Unfortunately, however, little of the fruits of these discussions has been brought to bear on the description and analysis of Nivkh phonology. Many previous works have described the phonology involved in these topics as being unique and complicated, and give the impression that they are isolated instances which are language-specific to Nivkh. In contrast, this thesis attempts to show how the latest findings on these topics in the current theoretical framework lead us to a better understanding of Nivkh phonology.

In this introductory chapter I will first outline the phonological assumptions which are defended in this thesis. Next, I sketch the sociolinguistic situation of this endangered language (with special emphasis on the West-Sakhalin dialect) and the linguists' efforts in language documentation.
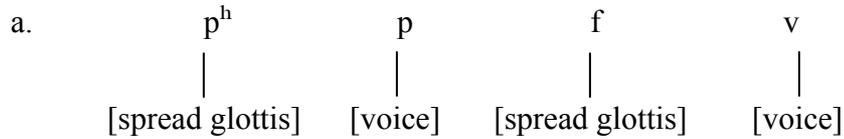
## 1.1   Phonological Assumptions

### 1.1.1  Laryngeal Contrast and Laryngeal Phonology

Chapter 3 focuses on the nature of laryngeal contrast and the laryngeal phonology of WSN. In word-initial position, WSN contrasts aspirated plosives with non-aspirated plosives, and voiced fricatives with voiceless fricatives. While most previous works assume that this contrast is symmetric in the sense that the members of the contrast are opposed with equal strength (X/Y. See (1) below), I argue that the contrast is asymmetric; one member of the contrast is phonologically stronger than the other (X/zero). To be specific, I propose that the aspirated plosives and the voiceless fricatives are the marked members of the contrast, and that the non-aspirated plosives and the voiced fricatives are the unmarked members (2).
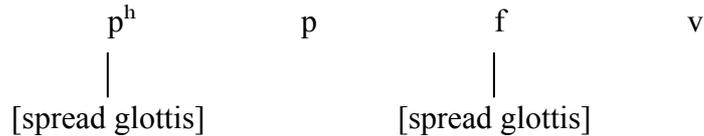
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[1] In this thesis, I capitalize the names of specific phonological rules when I am not referring to the process as a general phonological phenomenon. Thus by *Consonant Mutation* I refer to consonant mutation process which is specific to Nivkh.

(1) Symmetric contrast

      a.               $p^h$              p              f              v

                    |              |             |             |

       [spread glottis]    [voice]    [spread glottis]    [voice]

(2) Asymmetric laryngeal contrast

                 $p^h$               p              f              v

                  |                         |

       [spread glottis]             [spread glottis]

There is evidence which argues against the equipollent view (X/Y) but supports the idea that the laryngeal contrast is asymmetric (X/zero) in WSN. The laryngeal phonology of aspirated plosives and voiceless fricatives is only minimally influenced by the surrounding segments and remains invariable across a great number of contexts. This is in contrast with the surface laryngeal phonology of non-aspirated plosives and voiced fricatives which are susceptible to effects of surrounding segments and position. The stability of one member in a phonological contrast is called 'dimensional invariance' (Avery and Idsardi 2001) and is the hallmark of asymmetric contrast.

One way to represent the asymmetric contrast is to use unary features. In such a system, features do not represent contrast by binary specification (+/-), but do so by being either present or absent in a given segment. In this thesis, I defend the position that phonological features are unary and that when features express a phonological contrast, they do so by being either present or absent from the underlying representation. This is the basic tenet of phonological contrast of Modified Contrastive Specification, a version of Underspecification theory which is pursued by phonologists of the Toronto School of Contrast (Dresher, Piggott and Rice 1994, Avery 1996, 1997, Avery and Idsardi 2001, etc.). This theory asserts that there is a strong connection between i) phonologically active features which are responsible for the underlying contrast in the segmental inventory and ii) the visibility of such features in lexical phonology. The prediction is that the marked members of the contrast are actively involved in the phonological events of the lexical phonology and vice versa.

On the other hand, the unmarked member of the contrast may be implemented by phonetic cues in order to over-differentiate the contrast on the surface. Such an implementation changes the mode of contrast from an asymmetric to a symmetric one, and is called 'enhancement' (Stevens and Keyser 1989, Avery and Idsardi 2001, etc.). In this chapter, I will present arguments in support of the view that voicing plays such a role in WSN. It will be shown that processes which involve voicing contain

characteristics which deviate from those predicted by lexical phonology. One such example is Final Fricative Voicing (FFV). This is a process in which final fricatives undergo voicing when followed by voiced fricatives, vowels or sonorants. In citation forms or when followed by voiceless segments, final fricatives surface as voiceless.

(3)     a.     tʰulf     'winter'     tʰulv vo          'winter village'

        b      cʰxɨf     'bear'       cʰxɨv lɨj-          'kill a bear'

        c.     als       'berry'      alz ŋa-             'gather berry'

        d.     kins      'devil'      kinz it-            'go insane'

        e.     cus       'meat'       cus pɨɲx           'meat soup'

        f.     tɨf       'house'      tɨf r̥ɨ             'main door'

At first glance, this process seems to contradict the proposed asymmetric specification, since it makes reference to the voicing of the triggering fricatives, which should be absent according to the proposed asymmetric contrast with [spread glottis] as the only underlying feature. A closer look reveals, however, that this process has characteristics which are not typical of processes of lexical phonology. First, final fricatives undergo voicing when followed by vowels and sonorants as well. This shows that voice assimilation actually makes reference to non-contrastive voicing, and suggests that it is not a lexical process.

     Second, FFV exhibits characteristics of a 'fast speech' process. In the recordings of conversations and recitations of folktales, there are occasional instances of FFV applying between relatively large syntactic constituents. For instance, it applies between a subject and a predicate.[2]

(4)     a.     haŋrmaz ŋarma-        (< haŋrmas)
               gimlet   wait
               'The gimlet (anthropomorphized) waited for (someone).'
                                                     (Shiraishi and Lok 2002: 21)


        b.     vulvulu cʰxɨv jiv-ra    (< cʰxɨf)
                black  bear   be-HILI
               'There was a black bear.'          (Shiraishi and Lok 2002: 9)

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[2] Nivkh is a head-final language and the canonical word order is SOV.

c.  iv  j-ama-ŋan        (< if)
3SG INDEF-look-when
'When he looked.'                        (Shiraishi and Lok 2003: 26)

This is in sharp contrast to a process such as Consonant Mutation, which does not apply between such large syntactic constituents even in fast speech (Chapter 4). As we will see in Chapter 4, Consonant Mutation strictly applies within its maximal domain of application (which is syntactically defined) and never exceeds it.

These characteristics indicate that voicing, which is associated with the non-lexical process such as FFV, is implemented on the surface. Accordingly, we maintain the hypothesis that laryngeal specification of Nivkh obstruents is asymmetric.

## 1.1.2  Consonant Mutation

Consonant Mutation (henceforth CM) is the best-known linguistic phenomenon of Nivkh and is also discussed in textbooks (e.g. Kenstowicz and Kisseberth 1979: 436-437). A closer examination, however, reveals that this process has many peculiar characteristics which go beyond textbook discussion.

CM targets morpheme-initial obstruents and changes their continuancy under specific phonological and morpho-syntactic conditions. Descriptively, there are two processes involved: Spirantization changes a plosive to a fricative, and Hardening changes a fricative to a plosive.

CM exhibits characteristics which challenge the existing theoretical understandings of the relevant processes. For instance, Spirantization may apply after a plosive. Cross-linguistically, however, it is known that spirantization is very unlikely to occur after an obstruent (Kirchner 1998, 2004, Ségéral and Scheer to appear). In Nivkh, however, Spirantization applies after a plosive to the same extent as after a continuant, i.e. a vowel or a glide.

(5)  Spirantization after a continuant
a.  tʰom        'fat'       cʰo r̥om      'fish fat'
b.  cʰo         'fish'      lɨɣi so      'salmon'
c.  pɨɲx        'soup'      cʰo vɨɲx     'fish soup'
d.  ciɣr        'tree'      qoj ziɣr     'larch tree'

(6)       Spirantization after a plosive

    a.     piɲx         'soup'        pʰeq viɲx      'chicken soup'

    b.     pʰoqi       'air bladder'  miki̵k foqi    'air bladder of dace (fish)'

    c.     cʰŋi̵r       'grass'       kʰe̥rq sŋi̵r    'seaweed (*lit.* sea grass)'

    d.     cus         'meat'       pʰeq zus     'chicken meat'

Another problem is that Spirantization targets morpheme-initial plosives to the exclusion of medial and final plosives. The examples in (5-6) above show that Spirantization targets segments in a specific position namely, morpheme-initial plosives which follow a morpheme juncture. In contrast, medial and final positions are excluded from Spirantization targets. Again, this is not a typical context of spirantization cross-linguistically. In many languages, spirantization is a process of weakening (lenition), and weakening typically targets prosodically weak positions.

There are several approaches in the literature to describe CM and to account for the problems mentioned above. One approach is to give up phonological analysis altogether and regard CM as a morpho-syntactic phenomenon, comparable to consonant mutation in the Celtic languages. Alternatively, one may postulate a language-specific phonological rule of CM and regard it as an isolated process with no analogues in the world's languages. However, both approaches are explanatorily unsatisfying. I will refute the first approach by presenting new data from fieldwork which supports the view that CM is a synchronic phonological process. I will argue that the above-mentioned problems disappear, and that CM is not an isolated phenomenon, if we regard Spirantization as an instance of perceptually motivated process of lenition (Harris and Urua 2001, Harris 2005). A perceptually motivated lenition is a phonological operation that diminishes perceptual information from the speech signal in order to accentuate the syntagmatic contrast between information-heavy prominent positions and information-light (weak) non-initial positions within a specific domain (Harris and Urua 2001: 86). In particular, I will argue i) that Spirantization is a non-local process which has no specific segments as a trigger, ii) that the syntagmatic contrast is realized among morphemes which are in the syntactically defined domain of CM, and iii) that in certain contexts, Spirantization and Hardening conspire to achieve the same sequences of segments in order to satisfy local perceptual demands. i) accounts for the above-mentioned problem that Spirantization applies even after plosives. This problem disappears if Spirantization had no specific segments as triggers, but applied in a non-local fashion to a specific domain in order to satisfy perceptual demands of creating informational asymmetry. ii) accounts for the fact CM is sensitive to domain-internal morpheme junctures, as illustrated above. I

propose that in Nivkh, Spirantization creates informational asymmetry (=syntagmatic contrast) between the domain-initial morpheme and the remaining non-initial morphemes in the designated informational domain. This explains why morpheme-initial positions are targets to the exclusion of medial and final positions. The latter positions are exempt from targets since they do not contribute to realize syntagmatic contrast among morphemes.

Finally, I consider contexts where Spirantization is blocked. These are the positions after a fricative and a nasal. Since these are also the contexts where Hardening applies, there is an apparent conspiracy of the two processes to achieve the same sequences of segments. I propose that these sequences surface in order to satisfy local phonological demands, which disfavor specific sequences of segments for perceptual reasons. This contrasts with Spirantization, which I claim to be a non-local process (i.e. it has no local triggers).

The overall picture of CM which the current thesis depicts is the following: CM is an interaction of a non-local process of Spirantization and a local process of Hardening (and the blocking of Spirantization in the same context) which are both perceptually motivated. This analysis is not a surprising one. It demonstrates how the complicated phonological patterns which CM exhibits on the surface can be deduced from a restricted number of phonological generalizations. In this sense, CM is by no means a language-specific isolated phenomenon.

## 1.2   Sociolinguistic Introduction

### 1.2.1  The West-Sakhalin Dialect

An important task of the current thesis was to conduct fieldwork and collect data from the contemporary speakers of a specific dialect of Nivkh, namely the West-Sakhalin dialect (WSN). There are several reasons why I chose this dialect as the target of my project. One reason is that a description of this dialect in the literature is sorely missing. WSN has hitherto hardly been described, mostly due to the relative inaccessibility of the area. The speakers had lived primarily in settlements on the West coast of North Sakhalin, and were later relocated to larger villages due to the resettling and concentration policy, which took place in the 1950-70's.[3] Before this resettlement, access to WSN speakers was very limited because of geographic and, for Western researchers, political reasons. The faint roads on the sandy soil easily change to mud

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[3] Grant (1995) gives an overview of how collectivization proceeded on Sakhalin.

baths after summer rains, and in the winter heavy snowfall isolates the area from the outside world almost completely.

In addition, since Sakhalin borders on Japan, USSR foreign policy closed off the whole island from Western researchers until the late eighties. The first fieldtrip to Sakhalin by a group of Western researchers did not take place until 1990 (cf. de Graaf 1992). At that time, the resettling and concentration of the aboriginal population had already been completed. The speakers of WSN lived in villages such as Nekrasovka, Moskal'vo, Ekhabi and the city of Okha (map 2), which are located in the north and northeast of Sakhalin. These places are relatively easy to reach the whole year round with public transportation such as train and bus. This improvement in accessibility is the other reason why I decided to do fieldwork on this dialect.

Currently, there are hardly any people living on the West coast, the homeland of many WSN speakers. In the summer, some people go there and spend a couple of months to catch fish and gather berries. Many of my recordings were therefore made in the winter, when these people are back in their apartments in Okha.

From a linguistic point of view, the geographic isolation of the West coast had an advantage, though. Thanks to inaccessibility, the compact settlements in this area benefited from a relatively dense concentration of Nivkhs. As a consequence, the speakers in the West preserved their language well compared to speakers in other areas. Most WSN speakers now live in the northernmost administrative district of Sakhalin, the *Okhinskii raion*,[4] and this district is known for the high number of Nivkh population on Sakhalin.[5] Although the exact total number is unknown, the number of WSN speakers was estimated to be about 180 in the 1980's (Eremin, Taksami and Zolototrubov 1988: 197).

As a consequence of the high number of WSN speakers, many publications in Nivkh are nowadays written in this dialect. The monthly Nivkh newspaper *Nivkh Dif* ('the Nivkh Language') has its headquarters in the village of Nekrasovka and is led by WSN speakers. Description and documentation of this dominant dialect thus meets the growing demand and interest of the local Nivkh community as well.

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[4] The transliteration of the Russian words in this thesis follows the Library of Congress system. Soft signs and hard signs from the Russian language are spelled with one and two apostrophes, respectively. I make an exception for accepted Western spellings of names such as *Gilyak*, rather than *Giliak*.

[5] According to Vysokov (2006), the percentage of the Nivkh population in this district is 2.9%. The percentage of Nivkh on the total population of Sakhalin is 0.48%.

## 1.2.2 The Current Sociolinguistic Situation

The current sociolinguistic situation of Nivkh is catastrophic. According to the latest census of the Russian Federation held in 2002, there are 4,902 Nivkh people living in the Amur region on the continent and on the island of Sakhalin, of which 2,452 live in Amur and 2,450 on Sakhalin (Federal State Statistics Service 2004). In these regions, there are 477 people who regarded themselves as speakers of Nivkh. The speakers I met during fieldwork to these areas were all above the age of 60, and they were all bilingual in Nivkh and Russian. In some places, Nivkh is still occasionally used among the older generation. During fieldwork, I often saw these people speaking Nivkh when they visited each other, at cultural events, meetings, parties, or even at home when all the participants of the conversation understood Nivkh. However, it was also often the case that they had to switch to Russian when someone who did not understand Nivkh, often a younger member of the family, was present. Nowadays, the use of the Nivkh language among family members is rare.

The generation between the ages of 40 to 60 still has some passive knowledge of the language. Some of them are still able to follow a fluent conversation in Nivkh. But when they want to participate in conversation, they do so in Russian. The generation under 40 does not understand Nivkh. Russian is the only language which they understand and use everyday. Except for some words and phrases, Nivkh therefore no longer exists in this youngest generation.

The UNESCO Red Book on Endangered Languages (Janhunen 1993) describes the sociolinguistic situation of Nivkh as 'nearly extinct' in the Amur area and 'seriously endangered' on Sakhalin. The diagnosis 'nearly extinct' applies to languages "with maximally tens of speakers, all elderly", and 'seriously endangered' to those languages "with a more substantial number of speakers but practically without children among them" (*ibid.*). The situation is negatively influenced by the fact that most Nivkh live among other Russian speaking population and that they form tiny minority in the region. The census in 2002 shows that the Nivkh population is approximately 0.48% of the total population of Sakhalin.

Language shift from Nivkh to Russian began in regions where contact with Russian speaking population was dense. One Nivkh woman remembers,

> "In the 1950's to the beginning of 1960's, there were still children who spoke fluent Nivkh and some or sufficient Russian, entering the elementary school of Rybnovsk [a village in the Northwest coast. H.S.]. At the same time, children who entered from the village of Nekrasovka spoke only Russian. The close distance to the city [Okha. H.S.], in which contact with Russian speaking

> population was inevitable, had negatively influenced the maintenance of the
> Nivkh language and tradition. Even the parents spoke Russian to their children."
> (Bessonova 2003: 216. My own translation)

Many of the speakers whom I met and worked with come from the Northwest coast of
Sakhalin. As mentioned in section 1.2.1, this is not an accident. The Northwest coast
is one of the areas in which the language was relatively well preserved. There are
several reasons for this. First, this area is remote from big cities and is geographically
isolated. Second, people lived in small communities which consisted primarily of
Nivkh population. Therefore, these people could keep their traditional lifestyle until
they had to move to large kolkhozes. Third, the Nivkh in this area are in close contact
with Nivkh on the continent, who live in villages across the Tatar Strait. Some of my
language consultants were born in the Amur region and later moved to Sakhalin. Even
today, some Nivkh risk their lives to cross the Strait (approximately 40km) on modest
old fishing boats.

## 1.2.3 Dialects

Nivkh has two dialect groups, the Amur dialect group and the Sakhalin dialect group.
The classification of these two dialect groups corresponds roughly to the *amurskii
dialekt* and the *sakhalinskii dialekt* in the current conventional terminology in Russia.
Within each group, there are numerous sub-dialects, some of which have not been
described or documented to date. The best-described dialects are the dialects spoken
on the lower reaches of the Amur River (Kreinovich 1934, 1937, Panfilov 1962, 1965,
1968, etc.) and the dialects on Sakhalin spoken in Nogliki (Gruzdeva 1998, etc.) and
Poronaisk (Hattori 1955, 1962a,b, Austerlitz 1956, etc.). The first Nivkh-Russian and
Russian-Nivkh dictionaries by Savel'eva and Taksami (1965, 1970) are based on the
dialects spoken in the Amur area.

Overview of the dialects

| Dialect group | Dialect | Location |
|---|---|---|
| Amur dialect group | Continental Amur | Aleevka, Nizhnyi Pronge, Kal'ma, etc. |
| | West-Sakhalin (WSN) | Ten'gi, Chingai, Rybnoe, Rybnovsk, etc. |
| | North-Sakhalin (Shmidt) | Shmidt Peninsula |
| Sakhalin dialect group | East-Sakhalin | Nogliki,Venskoe, Katangli, Nyivo, Chaivo etc. |
| | Southeastern (Poronaisk) | Poronaisk |

The description of this thesis is based on data which I recorded from speakers of WSN. WSN is closely related to the dialects spoken in the Amur area, rather than to those dialects spoken in the eastern part of Sakhalin. This is also the impression of the speakers themselves.

In this thesis, I will refer to the dialects spoken in the Amur district on the continent (*Khabarovskii krai*) collectively as the 'Continental Amur dialect' to contrast them with the dialect of my language consultants. The name 'West-Sakhalin dialect' dates back to the oldest taxonomy of Nivkh dialects by Shternberg (1905/1999) and has been subsequently used by other authors as well (e.g. Eremin, Taksami and Zolototrubov 1988). I use 'Amur dialect' and 'Sakhalin dialect' as shortenings for the Amur dialect group and Sakhalin dialect group, respectively.

WSN was spoken in villages such as Tamlavo, Nganivo, Kryuvo, Ten'gi, Chaghngi (Chingai) and Rybnovsk (map 3). Many of these villages no longer exist. Most of my consultants were born in these villages and were later moved to other areas of the island.

Little is known about the differences among the sub-dialects of WSN. During fieldwork, I got the impression that the speakers regarded those differences to be subtle. WSN borders on another sub-dialect of the Amur dialect, the North-Sakhalin dialect (the Shmidt dialect) spoken in the Shmidt Peninsula. Not much information is available about this dialect, except a short description by Kreinovich (1979). My

consultants are conscious of the differences between this dialect and their dialect and they often mimic the way the speakers of Shmidt spoke. Currently, all speakers of the Shmidt dialect live in areas outside the Shmidt Peninsula. The southern border of the WSN lies in Pogibi (map 3), according to Shternberg (Shternberg 1905/1999: 17).

Like the Amur dialect group, the Sakhalin dialect group consists of a number of sub-dialects. As mentioned above, the best-described dialects are those dialects spoken in and around the town of Nogliki and those spoken in the Poronaisk district (map 2). In the literature the former dialect is called the 'East-Sakhalin dialect' and the latter the 'Southeastern dialect', or the 'Poronaisk dialect'. The Southeastern dialect is described mainly by non-Russian linguists, such as Akira Nakanome (1917), Moritaka Takahashi (1942), Takeshi Hattori (1955, 1962a,b, 1988, etc.), and Robert Austerlitz (1956, 1959, etc.). The Japanese linguists did fieldwork in the southern half of Sakhalin in the period of the Japanese regime (1905-1945). After the end of the Second World War, a few Nivkh families from the Poronaisk region immigrated to Hokkaido, Japan. Austerlitz investigated the language of one of these immigrants, namely that of Mrs. Chiyo Nakamura, who settled in the city of Abashiri, in Northeast Hokkaido.

In contrast to the Amur dialect, no dictionary of the Sakhalin dialect was available for a long time. Recently, a Nivkh-Russian dictionary based on this dialect was published by Vladimir Sangi, a national writer and poet from Nogliki, and Liudmila Gashilova, the Nivkh teacher at the Gertzens Institute in Saint Petersburg (Sangi and Gashilova 2003).

There is no comprehensive study on the distances among dialects of Nivkh, nor is there a dialect atlas. The major differences are undoubtedly between the Amur dialect and the Sakhalin dialect, which is also the view of the Nivkh themselves. Some differences in phonology and morphology among dialects are sketched in Kreinovich (1934, 1979), Novikova and Savel'eva (1953) and Panfilov (1962). Nakagawa, Sato and Saito (1993) report a word list of 220 items of eight speakers from different villages on Sakhalin. Many of these dialects still have some speakers of excellent quality and it is up to the international linguistic community to document the speech of these people.

## 1.2.4  Language Maintenance and Revival

Currently, Nivkh is taught in three schools on Sakhalin. These are the elementary schools in the villages of Nekrasovka, Nogliki and Chir-Unvd (map 2). According to Laigun (2003: 239), there were 202 pupils learning the Nivkh language at these

schools in the school year of 1999-2000. 180 of them learned the language from the 1st to the 4th grade (age 7-10) as a compulsory subject, and 22 as an elective subject. In the upper grades Nivkh is not taught. The current curriculum started in 1981, after that the Russian Ministry of Education gave permission to teach Nivkh at the lower grades of elementary schools (Polet'eva 2003: 209). The teachers are trained at pedagogic institutes in Saint Petersburg and Yuzhno-Sakhalinsk. In these institutes, linguists and pedagogues organize lectures about theory and teaching methods of the language (Polet'eva 2003: 209). All teachers are Nivkh, but not all of them have learned Nivkh as their first language.

Nivkh is also taught in two kindergartens, in Nekrasovka and Nogliki. In the kindergarten in Nekrasovka, Nivkh is taught to children from the age of three (Bessonova 2003). The teaching program in this kindergarten is organized with special emphasis on the life and the culture of Nivkh. Culturally important notions such as shamanism, the bear festival, clan, flora and fauna of the region are the topics which are incorporated in this program (Bessonova 2003). A number of teaching materials such as textbooks, picture books and dictionaries have been published with the collaboration of teachers, scholars, artists and local administration.

Despite such efforts, people who are engaged in the educational activities take a grim view of the prospects of language maintenance and revival for understandable reasons. The biggest problem is the limited social context in which Nivkh can be used, as Svetlana Polet'eva, the Nivkh schoolteacher in Nekrasovka, points out (Polet'eva 2003: 211). Nivkh is taught only in the first grades of the elementary school and for most pupils there is no way to further develop or practice their knowledge of Nivkh in the rest of their lives.

In addition, Nivkh is not an easy language to learn for children whose first language is Russian. Polet'eva points out that many children regard Nivkh as a tough subject, especially so when they have to learn other (usually some European) languages at the same time (Polet'eva 2003: 212). Language contact with Russian brought further complications into the phonological system of the language. For instance, the massive introduction of loan words from Russian gave phonemic status to voiced plosives (at least in textbooks), which only had an allophonic status in Nivkh (cf. Chapter 3). As a consequence, children have to acquire a three-way laryngeal contrast of plosives (aspirated, non-aspirated, voiced) from the pronunciation and the spelling. This is not an easy task, as pointed out by the Nivkh ethnologist Chuner Taksami (1997).

More than a few parents want to see their children become fluent in English rather than in Nivkh. On Sakhalin, international oil and gas companies are investing billions

of dollars (the Sakhalin Projects) and the key to a successful economic life is undoubtedly a good knowledge of English.

The only way to improve this unfortunate situation for the Nivkh language is, as Polet'eva points out, to broaden the social context in which Nivkh can be used (Polet'eva 2003). In order to achieve this, she proposes to strengthen the infrastructure which supports the Nivkh-Russian bilingual community. These are,

1. Academic institutions in which linguistic and pedagogic issues can be studied.
2. A social network of local intellectuals, teachers, parents, academics, etc.
3. An institution which organizes language courses, and propagates the role of language and culture in the community.
4. Organizations which provide material support, such as, textbooks, teaching aids, newspapers, journals and literature.

Some of these have already been realized, albeit on a limited scale. Since 1990, there has been a monthly Nivkh-Russian newspaper 'Nivkh Dif'. The Sakhalin Museum of Regional Studies[6] (in Yuzhno-Sakhalinsk) has a rich collection of Nivkh materials, and occasionally organizes workshops and fieldtrips, as described in sections 1.3.2 below.

However, these measures are not sufficient to stimulate the local people and stabilize the movement for language maintenance. Teachers complain about the lack of sufficient modern teaching material (Polet'eva 2003: 212). Unless some measures are taken, Nivkh will remain an endangered language in spite of the effort of those local schoolteachers.

## 1.3 Linguists' Efforts on Language Documentation

### 1.3.1 Fieldwork

Since access to speakers was restricted before Perestroika, most of the available descriptions and data of Nivkh are from linguists and ethnographers of (Soviet) Russia (Shternberg, Kreinovich, Panfilov, Savel'eva, Otaina, Taksami, etc.), or from non-Russian linguists who managed to record data of the Southeastern dialect, either under the Japanese regime (1905-1945) or from Nivkh immigrants who settled in Hokkaido (Japan) after the Second World War (Austerlitz 1956, 1959, etc., Hattori 1955, 1962, 1988, etc.). After Sakhalin opened up to Western researchers, a number of institutions

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[6] http://museum.sakh.com/eng/17.shtml

and individuals organized fieldtrips to collect linguistic material. However, the amount of available linguistic material is still modest and awaits further endeavors of field linguists.

Contact with such foreign researchers opened a way for some local researchers (both Russian and Nivkh) to publish their own work. Pukhta (2002) is one such example. This Nivkh schoolteacher in Nikolaevsk-na-Amure (Amur region. Cf. Map 2) worked on a Nivkh-Russian conversation textbook and thesaurus for a long time. When she was looking for possibilities to publish these works, she met the Japanese linguist Tohru Kaneko who was visiting the region for fieldwork. Kaneko proposed to publish her work in Japan in a series which specializes on the documentation of endangered languages (the ELPR project. See section 1.3.2 below). A monograph on Nivkh musicology has been published recently by the ethnomusicologist Natalia Mamcheva with the aid of a Dutch grant (Mamcheva 2003).

From 2000 to 2001, I spent a year on Sakhalin as a visiting researcher at the Sakhalin Museum of Regional Studies. With the aid of the museum staff and my Nivkh colleague Galina Lok, I conducted fieldwork in places such as Okha, Nekrasovka and Nogliki (map 2). Most of the examples in this thesis were recorded in this period. The recordings have already been published in part, as the following section describes.


## 1.3.2  Language Documentation and Feedback to Local Community

Prior to the completion of this thesis, I published three books with Galina Lok from the Dutch and the Japanese projects, 'Voices from Tundra and Taiga' (coordinated by Tjeerd de Graaf) and 'The Endangered Languages of the Pacific Rim'[7] (ELPR. Coordinated by Osahito Miyaoka). These are the series 'Sound Materials of the Nivkh Language' (Shiraishi and Lok 2002, 2003, 2004). This series of publications consists of Nivkh texts and the sound recordings corresponding to the texts. Each publication contains an audio CD of recitations of folktales, songs and conversation performed by WSN speakers. The transcription is in the Cyrillic-based alphabet (table 1), as conventionally used by the local people. In addition, a word-by-word translation is given in Russian. Although these publications are written in Russian, English and Japanese, the primary language is Russian. Choosing Russian as the primary language has the aim of facilitating and stimulating the study of the Nivkh language by the local people. This is because the current Ph.D. project has the additional aim of benefiting

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[7] http://www.elpr.bun.kyoto-u.ac.jp/

the local people and making them aware of their invaluable linguistic heritage. During the whole Ph.D. project period, we distributed about 250 copies of this series among the members of the local community in Sakhalin. We hope that these books will interest not only the older generation who still speak Nivkh, but also the younger generation who speak only Russian.

Another sort of feedback to the local community was instantiated in October 2003. We participated in a workshop for the local teachers of the indigenous people of Sakhalin, organized by the project 'Voices from Tundra and Taiga'. This one-week workshop was held at the Sakhalin Museum of Regional Studies and had the aim of familiarizing the local schoolteachers with the latest findings of linguistics. Linguists from the Netherlands and Saint Petersburg prepared lectures on phonetics, phonology and field linguistics, and showed how teaching methods can be improved by using modern linguistic equipment (such as speech-analyzing computer programs). About 40 participants from all places of Sakhalin joined the courses.

Another fruitful result of this workshop was that it offered an opportunity for academic researchers to come into contact with the local community members. Such organized events are useful since in order to make the local contact effective and meaningful, the academics have to know what the community's needs are. For instance, during this workshop the representatives of the North-Sakhalin dialect requested that we document their dialect. These speakers were aware that their dialect had hitherto hardly been described. At this moment, we are preparing projects which aim to describe these undocumented dialects of Nivkh.

## 1.3.3  Sound Archives

The oldest sound recordings of Nivkh date back to the beginning of the 20th century. These are the recordings made by the Russian ethnologist Lev Shternberg, and contain materials which are recorded on wax cylinders. Shternberg's material is archived in the Pushkinskii Dom, the sound archive of the Russian Academy of Sciences in Saint Petersburg. His recordings contain folktales of the Amur dialect (Burykin et al. 2005).

Since then, numerous recordings have been made by different individuals. The total quantity (and quality) of these sound recordings is unknown. The following list provides some information on the sound archives that we know to exist at this moment.

| Researcher | Recorded period | Archived place |
|---|---|---|
| L. Shternberg | 1910 | Saint Petersburg (Pushkinskii Dom) |
| E. Kreinovich | 1920's | Yuzhno-Sakhalinsk[8] |
| E. Gippius and Z. Eval'd | 1927-1929 | Saint Petersburg (Pushkinskii Dom) |
| S. Kozin | 1931 | Saint Petersburg (Pushkinskii Dom) |
| T. Hattori | 1930's to 40's | Abashiri[9] |
| R. Austerlitz | 1950's to 60's | London[10] |
| G. Otaina | unknown | Vladivostok[11] |
| V. Sangi | 1960- | Sakhalin[12] |
| I. Bogdanov | 1982 | Saint Petersburg (Pushkinskii Dom) |
| K. Murasaki | 1990 | Tokyo |
| H. Nakagawa | 2000 | Chiba |
| I. Tangiku | 2000- | Tokyo[13] |

In addition to these materials, there are presumably a number of recordings by individuals and institutions,[14] including those recorded by the Nivkh themselves. Unfortunately, many of these recordings are stored under conditions which are far from optimal.  During fieldwork, we often saw such audio tapes (often open-reel ones) stored carelessly in the dark corners of a bedroom.  From such observations, we conclude that not only the language is endangered but many such recordings as well (de Graaf 2004, de Graaf and Shiraishi 2004).  These recordings contain valuable information about the language and culture of Nivkh, especially since many of the speakers who have been recorded are no longer alive.  In order to save such recordings,

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[8] Sakhalin Museum of Regional Studies.

[9] Hokkaido Museum of Northern Peoples.

[10] These recordings contain folktales, riddles, songs, passages of shamanistic epic and a minimal pair list (Daniel Abondolo, p.c.).

[11] Far East Branch of the Russian Academy of Science.

[12] Partially available on Internet (http://www.ling-atlas.jp/nivkh.html).  See footnote 15 below.

[13] Partially available on Internet (http://www.ling-atlas.jp/nivkh.html).

[14] E.g., the phonetic department of the University of Saint Petersburg made recordings of the Nivkh students who studied in Saint Petersburg (Bondarko and Zinder 1962).

preservation measures should be taken before they are all gone. We hope that different institutions and individuals will cooperate to accomplish this task.[15]


## 1.3.4  The Use of Sound Materials in This Thesis

A unique characteristic of this thesis is that most of the cited examples can be listened on either audio medium (CD) or Internet. These are the examples from the series 'Sound Materials of the Nivkh Language' (Shiraishi and Lok 2002, 2003, 2004), which are available either as a publication (book with audio CD) or on the Internet (see References for URL). In this way, many of the examples in this thesis can be listened to and checked. This guarantees another important characteristic of the current thesis: accessibility to sound recordings.

    There are several reasons why we regard accessibility to sound data as important. First of all, sound recordings give the readers an opportunity to check the data. The importance of verifiability should not be underestimated, especially when one works on a language which is relatively unknown, like Nivkh. Second, for those who know the language, the sound recordings make it possible to find and correct errors which exist in the transcriptions. In case of suspicion, the reader may listen to the recordings and judge the adequacy of our transcription. Third, sound materials can be used as a linguistic corpus which provides useful information, not only on phonology but also on other disciplines of linguistics. For example, one can retrieve lexicographic information from the recordings for the purpose of compiling a dictionary. Fourth, sound materials are useful tools for the learning of the language. It can be used for self-study or in classes as teaching material. Part of our publication is already used for this purpose at the Faculty of the Northern Peoples in the Gertzens State University in Saint Petersburg. Fifth, and perhaps most importantly, like many indigenous people of Siberia, the traditional Nivkh transmitted important information (such as history and legends) from generation to generation by oral performance. The introduction of a writing system for Nivkh was realized only in 1932 (Eremin, Taksami and Zolototrubov 1988: 197). However, this writing system did not survive long because

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[15] Recently, the Research Institute for Languages and Cultures of Asia and Africa (Tokyo University of Foreign Studies) started a project to digitalize the sound archive of the Nivkh writer and poet Vladimir Sangi (coordinated by Itsuji Tangiku). These recordings contain folktales (available from the following website: http://www.ling-atlas.jp/nivkh.html).

the written language soon became Russian instead of Nivkh.[16]  Accordingly, even fluent speakers often have problems in reading and writing in Nivkh.  Therefore, we hope that sound recordings will facilitate the accessibility of those fluent speakers as well.  Moreover, the simultaneous publication of text and sound makes the way of transmitting information closer to the traditional style.

## 1.4   Organization of the Thesis

This thesis is organized as follows.  In Chapter 2, I sketch the basic phonology of WSN. Crucially, this chapter is not intended to be a re-introduction and summary of previous descriptions of Nivkh phonology.   Thanks to information from my language consultants, I could find new regularities in the phonology of Nivkh and shed light on those aspects which were hitherto unknown.  Although the details of such new findings need to be further examined, I chose to add such information as much as possible as a preliminary attempt towards an elaborated description of Nivkh phonology.

Chapter 3 discusses laryngeal contrast and phonology.   Chapter 4 discusses Consonant Mutation.  Chapter 5 concludes.

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[16] Kreinovich introduced the first Nivkh alphabet (for the Amur dialect), which was based on the Latin alphabet.  In 1937, this Latin alphabet was abolished.  In 1953, the Cyrillic-based alphabet was introduced and became conventional as it has remained until today.