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THE PHONEMICS AND MORPHOLOGY OF HOKKAIDO AINU
by
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A Dissertation Presented to the
FACULTY OF THE GRADUATE SCHOOL
UNIVERSITY OF SOUTHERN CALIFORNIA
In Partial Fulfillment of the
Requirements for the Degree
DOCTOR OF PHILOSOPHY
(Linguistics)

August 1968

## This dissertation, written by

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under the direction of hin... Dissertation Committee, and approved by all its members, has been presented to and accepted by the Graduate School, in partial fulfillment of requirements for the degree of

DOCTOR OF PHILOSOPHY
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Date........August, 1968

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## ACKNOWLEDGMENTS

I would like to thank my informants, Shigeru Kayano, Taro Sasaki, and Haru Itaku for their patience and cooperation. I am also grateful for the guidance of my dissertation committee: Drs. William Brown, Robert Kaplan, and Rudolph Zrimc.

Above all, however, I wish to express my everlasting gratitude to Dr. Paul L. Garvin of the Bunker-Ramo Corporation, Canoga Park, California, who through course work and private discussions taught me how to elicit, analyze, and present linguistic data.

The definitions employed in this work are based partly on my interpretation of Dr. Garvin's papers in On Linguistic Method. However, I am solely responsible for the format of this structural sketch, and any errors which may be present, both in regard to analysis and presentations, are my responsibility.

The following abbreviations will be used:
Hi Hiratori
Ho Horobetsu
HS Higashi Shizunai
s. singular
pl.
plural
lit. literally

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## INTRODUCTION

This presentation of the phonemics and morphology of the Hokkaido Ainu language is based on field work which was carried out during June and July of 1967 in Hokkaido, Japan. The intermediate language used was Japanese.

In order that my experience may be of benefit to other anthropological linguists who wish to work on Ainu, I shall briefly describe my approach to the problem of gathering data on this language. As far as I have been able to ascertain, prior to my research no Western linguist has ever worked first hand on Hokkaido Ainu with a synchronic description of the language as the main objective. I have also been unable to locate any published, reasonably complete, grammars of Hokkaido Ainu in the Japanese language, but this of course does not mean that none exist. I stress Hokkaido because the Ainu of the Kurile and Sakhalin Islands is different enough that most of what I say in this work will not be applicable to those "dialects," using this word advisedly. Hokkaido Ainu is, in fact, itself divided into a number of dialects, perhaps fourteen or so, the exact degree of mutual intelligibility of whose speakers is not known at all, except impressionistically. The range of mutual intelligibility is, however, quite great.

My work was confined to three of the southern Hokkaido dialects, viz., the Horobetsu, Hiratori, and Higashi Shizunai. I had
neither the time nor the funds to conduct an investigation of mutual intelligibility among these three dialects, but impressionistically, at least, it seems that a speaker of any of the three dialects could easily converse with and be understood by one of the other speakers. In fact, my two male informants from the Hiratori and Higashi Shizunai dialects often volunteered forms which they said they did not use but which they said were used by speakers of the other dialect. The two male informants also knew each other.

My initial contact with Ain! came through 42-year-old Shigeru Kayano, a male speaker of the Hiratori dialect. He is an incomparable informant and one of the very few fluent speakers of Hokkaido Ainu. As Ainu is a language which is rapidly dying out, Kayano may well be the only individual under 50 years of age with a native-like command of his ancestors' speech. In fact, perhaps only about 50 or so Hokkaido Ainu speak their language well. Many Ainu know basic vocabulary, and a few others can recite tales and give set orations, but very few can manipulate and improvise with the language. Some Ainu in Nibutani still use the language among thenselves, but elsewhere Japanese has replaced Ainu as the vehicle of communication. I would estimate that the next ten years will witness the death of all but a few Ainu speakers.

Realizing all this, Kayano has tape recorded over thirty hours of tales from older Ainu. He is also an amateur student of the language and knowledgeable about some of the other dialects. Also interesting is the fact that Kayano's pronunciation of Japanese shows the influence of Ainu. It was with this informant that my basic
and most important work was carried out.
My second informant was 84 -year-old Haru Itaku, a female speaker of the Horobetsu dialect. She was a monolingual speaker until the age of sixteen at which time she went to work as a cook for John Batchelor, a British missionary among the Ainu (b. 1854, d. 19).

Batchelor lived for many years among the Ainu, learned to speak the language fluently, and wrote several books, including a dictionary of the language with a grammatical appendix. Unfortunately, the dictionary and grammiar both suffer, because many dialects are mixed together without an attempt to separate the vocabulary and features of each. The grammar, furthermore, is an ad hoc attempt to force Ainu into an ill-fitting Indo-European mold. However, we must remember that Batchelor's works were published in the late nineteenth and early twentieth century, and he was thus only following a well-established tradition. Furthermore, he was a missionary, not a linguist, and had little to go on in the way of prior works on Ainu. In the light of all this, his achievements were indeed remarkable.

I tested the transcriptional accuracy of Batchelor's grammatical outline by translating many of his English glosses of Ainu words and sentences into Japanese and then eliciting the Ainu equivalents from my informants. In most cases the responses were, allowing for dialectal diversity, either similar to or exactly the same as what Batchelor had transcribed. Furthermore, I learned from Haru Itaku that one of the missionary's main informants, and a man whom she knew, was Kyokawa Inushite, an important Ainu and a speaker of Niikappu which is a southern Hokkaido dialect as were the three
which I investigated.
In addition, it was Batchelor who began to teach my Horobetsu informant Japanese which she still speaks with an Ainu accent. He also gave her an Ainu name, many of the Ainu having long ago abandoned their names in favor of Japanese ones.

My third principal informant was 62-year-old Taro Sasaki, a male speaker of the Higashi Shizunai dialect: which is the Ainu dialect closest to the Niikappu speech. My work with him concentrated mainly on the gathering of textual material, mostly of an autobiographical nature. Taro Sasaki has a vast, very deep knowledge of Ainu religion and tradition; furthermore, he is cognizant of dialectical differences and has a great love for his language.

Other Ainu also contributed short texts, songs, and individual words, but with the exception of two songs collected from an Ainu woman in Shiraoi, all were speakers of the Hiratori dialect.

In addition, an opportunity to let a Shiraoi dialect speaker hear my taped Horobetsu material presented itself. I found that the Shiraoi speaker had no trouble in understanding the Horobetsu dialect as was proved by his transiation of it into Japanese.

Unfortunately, it was not possible, nor feasible under the circumstances, to elicit exactly the same material from all my informants and then to compare it. A truly composite grammar of the three dialects could then have been written and all the dialectal differences noted. In some cases, however, duplication for the sake of comparison was obtained; but the outline is mainly a sketch of the Hiratori dialect supplemented by Horobetsu and Higashi Shizunai
materials. Dialectal differences are, of course, noted when definite evidence is available, but the reader must not assume that because no variant is listed the three dialects all agree. More often than not, they probably do, but to what extent may never be fully known due to the fact that poor health and advancing age may take their toll of my Horobetsu and Higashi Shizunai informants before I can work with them again; and, as far as $I$ know, they are the last fluent speakers of their respective dialects.

It can, however, be assumed that the material presented in this sketch is, in general, intelligible to the speakers of the three dialects.

Thus far, I have made no mention of the genetic relationships of Ainu, probable or otherwise. This is simply because $I$, along with other linguists, do not know. Much more detailed comparative work needs to be done before even a tentative speculation can be hazarded.

The following outline is a sketch not of a living language nor of a dead language but of a dying one which has been sadly neglected by modern linguists. It is a description of a language gathered from informants who can still speak Ainu but who seldom do.

I was thus faced with difficulties peculiar to the description of a language on the verge of extinction. The linguist who describes a dead language can use tise extant textual material. The linguist describing a fully viable language usually begins by describing the dialect considered to be the norm for the community by the native speakers. My informants, with the exception of Shigeru Kayano, had seldom used or heard Ainu spoken in the past few decades. The forms I
obtained were, therefore, those that the informants remembered from earlier years.

I present this sketch, not only as an increment to our knowledge of the world's languages, but also in the hope that comparativists will now be able to move one step closer in their attempts to determine the linguistic affinities of Ainu. Their work, coupled with that of archeologists and ethnobotanists, may eventually help to reveal the original homeland of the Ainu.

### 1.0 Types of Phonemic Units

In Ainu, there are four types of analytic units on the phonemic level of structuring: the phoneme and phoneme cluster, the syllable, the contour, and the phonemic phrase.

The phoneme is the minimal differentiating unit of the language, while the phoneme cluster is an uninterrupted sequence of two or more phonemes of che same type, i.e., either a vowel cluster or a consonant cluster.

The syllable, the carrier of stress, was determined by asking the informant to syllabate, i.e., to speak slowly. In Ainu the syllable is not a phonemic unit since syllable boundaries are predictable on the basis of the linear ordering of vowels and consonants.

The contour is a sequence of phonologic units bounded by two medial junctures, or by a medial juncture and a terminal juncture, or by a medial juncture and the start or finish of an utterance.

The phonemic phrase is a sequence of phonologic units bounded by two terminal junctures or by a terminal juncture and the start or finish of an utterance.

These phonemic units are presented in terms of the fusion of one into the other which results in fused units of a progressively higher order together with the prosodic features proper to each one:
phonemic phra:ses with terminal junctures; contours with medial juncture and contour configurations; syllables with stresses. Finally, the phonetics and distribution of phoneme clusters and segmental phonemes is presented within the frame of reference of the contour. The morphemic structure of the examples is not taken into account in the phonemic analysis or presentation.

### 1.1 Fused Units

Ainu speech is naturally segmented into phonemic phrases which are sequences of phonemes occurring between silence and a relatively long pause (the length varying from fractions of a second to seconds), or between two such pauses, or between such a pause and silence.

Pause, coupled with a set of prosodic characteristics, results in two terminal junctures: level juncture (symbol: /|/) and rising juncture (symbol: /|//).

A subdivision of the phonemic phrase results in contours which are sequences of phonemes contained between a terminal juncture or silence, and a relatively short pause (shorter than phonemic-phrasefinal pause), or between two such pauses, or between such a pause and terminal juncture, or silence.

Contour pause is termed medial juncture and is marked by space when it coincides with word boundaries. Space also marks contour boundaries coinciding with word boundaries. Within words, medial juncture is marked by the symbol /+/. A superscript ligature / / / links words contained between the same contour, while a da: ،/-/ links morphemes.

In addition, the contour is set off by an over-all intonation line or contour configuration.

A subdivision of the contour results in syllables which are the smallest sequences of phonemes spoken separately at dictation speed. The boundaries of syllables are not marked, as they can be predicted by the phonemic make-up of the contour. In addition, each syllable is characterized by one of three stress levels.

The prosodic features which I treat are those that serve a communicative function in conjunction with their fused units. Functions of a peralinguistic nature also occur, but their delineation has not been worked out as yet.
1.1.1 Prosodic features.--Two types of phonemic phrases exist in terms of contour content: simple and complex. Simple phonemic phrases are made up of one contour, while complex phonemic phrases contain more than one contour. The simple, or one-contour, phonemic phrase has the greatest number of individual occurrences, but, in total, complex phonemic phrases occur more often. The complex phonemic phrase may include up to five contours, but two contours are the norm.

Level juncture and rising juncture occur with both phrase types. Level juncture (/|/) denotes the finish of an utterance and implies that a new utterance is about to begin. Phonetically, it consists of a relatively long pause together with moderate lengthening of the phrase-final phoneme, vowel or consonant.

Rising juncture (/||/) usually denotes the finish of an utterance with no implication that a new utterance will begin.

Phonetically, it consists of a long pause together with a rising intonation line of the final contour of the phonemic phrase, the line reaching its peak at the phrase-final sy1lable and then gradually dropping. This is coupled with moderate lengthening of the phrasefinal phoneme, vowel or consonant.

Examples are: simple phrase with level juncture: anutar esi| you (pl. polite) came.

Simple phrase with rising juncture: pakno nen nuwen nennal| that's all for now (lit: sufficient copula affirmativeparticlécopula conclusive-particle).

Complex phrase with level juncture: ku koronkotan tapan Mopet my village is Mopet (lit: Inpossessed village this ${ }^{\text {Mopet). }}$

Complex phrase with rising juncture: emkota ariki ${ }^{\cap}$ an \| come quickly! (lit: very-quickly come is).

A contour may vary in length from one to nine syllables, but four-to-six-syllable contours are more common with five-syllable contours being the most common. One-syllable contours occur mainly in informant words, i.e., isolated examples elicited from informants during the linguistic analysis.

The joining of morphemic units within contours is very stable, since those groupings that are identical with idioms and phrases are the more common ones.

In addition, the contour is set off by an over-all intonation line or contour configuration. Thus far, one type of contour configuration has been ascertained for Ainu: neutral configuration (not
marked by a special symbol). Phonetically, it consists of a level intonation line with slight lengthening of the contour-final phoneme, vowel or consonant. Neutral configuration marks the transition to the next contour. An example is: kuani-anak ne as for me (lit: I-as-for copula).

The point of syllable division falls between two syllabic vowels, between two consonants, and between a syllabic or nonsyllabic vowel and a following intervocalic consonant. Dots on the line indicate the points of syllable division.

Examples are: between two vowels -- a.e-p food; between two consonants -- nis.pa master; between vowel and consonant -- ko.tan village.

The contour is thus made up of certain characteristic syllable types. In indicating these, /V/ denotes any vowel or diphthong; /C/ denotes any single consonant.

The syllable types occurring in any position within the contour are: V, CV, VC, CVC.

Examples are: $y$ in contour-initial --./ay/ in ay.nu i.tak
[the] Ainu language; $V$ in contour-medial --/e/ in ot.te.e.ta very ancient times; $V$ in contour-final -- /a/ in éarapáa have you gone? (lit: youngone question-particle) ; CV in contour-initial -/ha/ in ha.wêne.-ya.kun [thus I] speak (lit: spokêis-if); CV in contour-medial -- /ro/ in ko.rôsi.nut.ca their song (lit: they-had song); CV in contour-final --/ka/ in pi.ri.ka good; VC in contour-initial -- /en/ in en.-ko.r-e please (lit: me-gave); VC in contour-medial -- /an/ in e.ne?an.ka.tu [in] such [a] form (lit:
thus ${ }^{n}{ }^{\text {is }}$ form; $V C$ in contour-final -- /ek/ in hen.nefek don't come; CVC in contour-initial -- /tan/ in tan.to today; CVC in contourmedial -- /kus/ in si.kus.wen bad weather (lit: weather ${ }^{\text {fis-bad }}$ ); CVC in contour-final -- /sam/ in pi.rak.ka.i.sam [the] wooden clogs are gone (lit: wooden-clogs ${ }^{\wedge}$ are-not).

Syllables are also characterized by one of three stress levels. They are: primary stress, secondary stress, and absence of stress. One primarily stressed syllable occurs within a contour, and it coincides with the contour-final syllable. When the contour-final syllable is also a phonemic phrase-final syllable, the stress is more pronounced, but whether or not this constitutes an additional stress level or is merely a variant of primary stress has not been determined as yet. Thus far, no limitation seems to govern the number of secondarily stressed or unstressed syllables within a contour.

No minimum pairs were found for any degree of stress, and thus it does not appear to be distinctive. Nevertheless, secondary stress has not, as of this writing, been found to be predictable in terms of the phonemic environment. Consequently, it is written with the symbol/ $/$

Phonetically, primary and secondary stress are coterminous with an increased intensity of the stressed vowel.

### 1.2 Phonemes

The phonemes of Ainu are the vowels and consonants. The matrix of their distribution is the contour, and thus both individual phonemes and phoneme clusters are described in regard to their
contour-initial, contour-medial, and contour-final possibilities of occurrence.
1.2.1 Phoneme inventories.--The three dialects of Ainu under discussion, the Hiratori, the Horobetsu, and the Higashi Shizunai have five determinate syllabic vowels: $a, o, e, u, i$, and two nonsyllabic vowels or semivowels: w, y.

The contrast of the phonetically similar vowel pairs a and o, $a$ and $e$, and $u$ and $i$ in the three dialects is shown from the following minimum pairs: ora after -- oro in, apa doorway -- ape fire; a-nu is heard -- ani with.

The three dialects have the following nine consonants: $p, t$, $\mathrm{k}, \mathrm{c}$ (affricate), $\mathrm{h}, \mathrm{s}, \mathrm{m}, \mathrm{n}$, and r .

One case of neutralization occurs: in the Horobetsu dialect the contrast of the [ h ] allophone of h and the palatalized allophone, [ $\breve{s}$ ], of $s$ is neutralized before $i$. hi and si are thus in free variation. An example is: unihi ~ unisi (my) home.

Ail other contrasts are preserved in all other positions.
1.2.2 Phoneme variations.--Positional variation occurs in vowels and free and positional variation in consonants. $p, t, k, c$, have somewhat more positional variation in the Higashi Shizunai . dialect than in the Horobetsu dialect and a great deal more positional variation than in the Hiratori dialect. $k, n$ exhibit positional variation in the Horobetsu dialect somewhat different from that of the other two dialects. Other consonants, as well as all vowels, have close-to-identical allophones in the three dialects.

In all three dialects the syllabic vowels are lengthened in open syllables but less so than when they are in contour-final position. This lengthening is, in turn, less than that of syllabic vowels in phonemic phrase-final position. An example is: kuani•|I.

In addition, the syllabic vowels of the three dialects undergo a devoicing (symbol $\mathrm{V}^{\mathrm{h}}$, where V denotes any vowel) when they are contour-final vowels in open syllables. If this position coincides with phonemic phrase-final position as well ${ }_{\boldsymbol{T}}$ the devoicing effect is more marked. An example is: pirikànsèta ${ }^{\text {h }} \|$ good dog.
a, the open, unrounded, central vowel, is pronounced at a low point of articulation in all positions: kara he made.

The close, rounded, low back vowel o also has but one range of allophones: ota sand.
e is an open, unrounded, mid front vowel in all positions:
kes spot.
The close, rounded, high back vowel $u$ has an unrounded allophone $\ddot{\imath}$ before $y$; various degrees of unrounding also occasionally occur in other positions, but the nature of this variation, whether free or positional, has not been determined as yet; susu willow, kamuy $\left[k a m \ddot{n}^{i}\right]$ god, kusu $\left[k \ddot{\approx} \ddot{x}^{\circ}\right]$ because.

The close, unrounded, high front vowel $i$ has one range of allophones in the Hi and Ho dialects and a voiceless variant which sometimes occurs between $s$ and a voiceless stop in the HS dialect: kim mountain, sita [s $\mathrm{I}_{\mathrm{ta}}$ ] dog.
$w$ and $y$ are considered nonsyllabic vowels and treated in conjunction with other vowels rather than consonants because:

1) they are phonetically similar to $u$ and $i$, 2) their clustering pattern is not identical to that of consonanes, 3) they lack a marked allophonic range, as do most of the vowels, and 4) they undergo the same type of elision as the syllabic vowels.

Nonsyllabic vowels will henceforth be termed semivowels.
The semivowel $w$ has, in all three dialects, reduced allophones as the final part of diphthongs, fully articulated allophones elsewhere: inaw [ina ${ }^{W}$ ] (wood) offering, wa frem.

Nonsyllabic $y$ also has reduced allophones in diphthong-final position, fully articulated allophones elsewhere: aynu [a ${ }^{i} n u$ man, yupo elder brother.

The stops $p, t, k$ are voiceless fortis and articulated at bilabial, alveolar, and velar points of articulation respectively.

In the $H o$ and $H S$ dialects, intervocalic $p, t$ have voiced lenis allophones, [b], [d]; however, [b], [d] are less common than intervocalic [p], [t], especially in the Ho dialect: hapo [habo] mother, ante [ande] he put down.

Intervocalic $k$ has a seldom occurring voiced lenis allophone [g] in the HS dialect: yakun [yagun] if.

Before $i$ in the Ho dialect, a palatalized allophone of $k$, [ $\mathrm{k}^{\mathrm{y}}$ ], sometimes occurs: miki [mik ${ }^{\mathrm{y}} \mathrm{i}$ ] father; in the HS and Hi dialects facher is mici.

In final position, all three dialects have frequently occurring unreleased variants of $p, t, k:\left[p^{-}\right],\left[t^{-}\right],\left[k^{-}\right]$; impressionistically these allophones appear more frequently in the Hi dialect: nisap [nisap ${ }^{-}$] quick, at $\left[\mathrm{at}^{-}\right]$rope, ek [ $\left.\mathrm{ek}^{-}\right]$he came.

The affricate $c$ is produced at an alveopalatal point of articulation and has but one allophonic range in the Hi and $\mathrm{Ho} \mathrm{dia-}$ lects: cup [tšup] sun; a voiced allophone [dž] occasionally occurs intervocalically in the HS dialect: eci [edzi] you (pl.).

The spirant $h$ is produced at a glottal point of articulation: hoku husband; in the Ho and HS dialects, a voiceless bilabial allophone [f] always occurs before $u$; in the Hi dialect its occurrence is optional: hure [fure] red.

The spirant $s$ has free variants of various degrees of
 occurs before $i$ in all three dialects: su pot, si [ši] very.

Nasals $m, n$ are produced at bilabial and alveolar points of articulation respectively: mo quiet, nis cloud.

A velar allophone of $n$, $[n]$, often occurs in final position and before $k$ in the Ho and HS dialects: kotân [kotan] village, ronkay [ronka ${ }^{i}$ ] Ronkay (a male name).

The liquid $r$ is produced at a post-alveolar point of articulation: ru broad; voiceless and voiced flapped allophones [ $\underline{\tilde{\sim}}]$ and [ $\tilde{\mathbf{r}}]$ occur medially in all three dialects: pirika [pir̂inika] good, kopasrota [kopasr̃ota] he scolded.
1.2.3 Problem areas.--Indeterminacy occurs in the following cases where predictability and/or free variation have not, as yet, provided sufficient evidence to judge whether the sounds concerned should be treated as phonemes or allophones: in the Ho dialect one instance of a voiced velar fricative [g] occurs: [kagapo] [my] elder
sister. In the Ho and HS dialects a labialized voiceless velar stop $\left[\mathrm{k}^{\mathrm{W}}\right]$ sporadically occurs before syllabic vowels: [ $\mathrm{k}^{\mathrm{W}} \mathrm{o}$ ] if. In the Ho dialect, a palatalized alveolar nasal $\left[\mathrm{n}^{\mathrm{y}}\right]$ sporadically occurs before syllabic vowels: [ $\mathrm{n}^{\mathrm{y}}$ ep] what.
1.2.4 Phoneme distribution.--The distribution of phonemes in Ainu is characterized by a paucity of vowel clusters and the restricted nature of consonant clusters.
1.2.5 Vowel distribution.--All vowels are found in initial, medial, and final position in the three dialects.

Examples are: a -- at rope, kara he made; o-- op spear, poro large; e-- en me, nepne anything; u -- uturu^uturu sometimes; i -- ita table, siri weather.

Vowel groupings are composed of either two or three syllabic vowels separated by glottal constriction which ranges from a full glottal stop to slight tension--vowel clusters, or a syllabic vowel with adjacent semivowel-diphthongs, or a syllabic vowel with two adjacent semivowels--triphthongs.

Any syllabic vowel followed by any syllabic vowel may form a vowel cluster, bui not all of the possible clusters occur with equal frequency. Among the most typical vowel clusters are: aa -- taata there; oa -- toan that; ua -- kuani I; ia -- kuani-anakne as for me (lit: I-as-for copula).

A trisyllabic cluster is: $\mathrm{e}^{\wedge} \mathrm{e}^{\wedge}$ a have you eaten (lit: you^atéquestion particle).

The semivowel in diphthongs either precedes the syllabic
vowel--rising diphthongs, or follows it--falling diphthongs.
w-initial rising diphthongs are: wa, wo, we. They occur
initially and after both vowels and consonants: wa from, wose it howled, wen bad.
y-initial rising diphthongs are: ya, yo, ye, yu. They occur initially and after both vowels and consonants: ya land, yoni it shrank, ye he said, yuk deer.
w-final falling diphthongs are: aw, ew, uw, iw. They are found initially and after both vowels and consonants: inaw (wood) offering, upew medicinal herb, uwonnere he knew, siwnin green.
$y$-final falling diphthongs are: ay, oy, ey, uy. They are found initially and after both vowels and consonants: aynu man, patoy lips, heheypa he peeked at, uytei he employed.

Some diphthongs contrast with corresponding vowel clusters in analogous positions: aynu man a-ikka it was stolen.

The only triphthong in my corpus is yay. It occurs initially and medially: yay-kata one's self.

One geminate diphthong occurs: ayay baby.
1.2.6 Consonant distribution.--Single consonants $p, t, k, s$, $\mathrm{m}, \mathrm{n}, \mathrm{r}$ occur initially, medially, and finally; perepa he broke it, sep broad; teta here, pet river; kamakap weaving loom, mik it barked; cep fish, huci grandmother; heheypa he peeked at; sisam foreigner, tunas quick; memke he shaved, kim mountain; nenka somebody, mon labor; riri waves, ker shoes.

Geminate consonants are: $\mathrm{pp}, \mathrm{tt}, \mathrm{kk}, \mathrm{ss}, \mathrm{mm}, \mathrm{nn}$. All of these occur only medially: horippa he danced, atte he hung, akkari than, husse he blew, umma horse, anno annihilation.

The above are cases of rearticulation, rather than of consonant prolongation, with the second onset weaker than the first. Furthermore, the geminate consonants occur in separate syllables--the first is syllable final, while the second is syllable initial.

Consonant clusters also occur oniy medially and are of two types: homorganic and, the most frequently occurring, non-homorganic.

Homorganic clusters are: $\mathrm{tn}, \mathrm{sn}, \mathrm{mp}, \mathrm{nt}, \mathrm{ns}:$ nupetne joyful; pisne seashore; toampe that; akosonte clothing; wen sikus bad weather.

Non-homorganic clusters include: pk -- nepka something; pt -- marapto feast; ps -- tapsutu shoulder; pn -- nep ne-yakka anything; tp -- mitpo grandchild; tc -- katcak weak; tk -- satke he dried; ts -- pet`susu river willow; kp -- akpo [my] younger brother; kt -- nucaktek happy; kn -- anakne as for; $k r--$ ek nrusuy he wished to come; sp -- nospa he chased; sk -- niskuru cloud; sr -- kopasrota he scolded; mk -- emko half; ms -- humse he grunted; mn -- sisam'ni-neyakka also [the] foreign person; nk -- hanke near; nm -- tapan Mopet ${ }^{\text {K kotan }}$ this village [of] Mopet; nr -- cinru snow shoes.

One three consonant cluster occurs: HS nts -- antsami thistle.

## CHAPTER II

## MORPHOPHONEMICS

2.0. In discussing the morphophonemics of Ainu, the teim base form will refer to the phonemic shape of the morpheme not affected by contact conditions, and the term alternant form will refer to the phonemic shape of the morpheme under contact conditions.

Morphophonemic variations--i.e., automatic change of the phonemic shape of all morphemes of a certain type (whether compulsory or optional)--will be discussed here. Selective morpheme alternationsi.e., change of the phonemic shape of some morphemes of a certain type to the exclusion of others--does not occur in Ainu. Isolated morpheme alternation--i.e., alternation which affects only one or a small number of individual morphemes--will be mentioned and exemplified here, but a full list of variants is reserved for the pertinent portions of the morphology.

Of the contact conditions which determine morphophonemic variation and morpheme alternation only satidhi, i.e., adjacency is pertinent in Ainu. Furthermore, a combination of assimilation and truncation, truncation, a combination of elision and truncation, a linking semivowel, and reduplication occur.
2.0.1. The phonemic shape of morphemes in isolation.--A single vocalic nucleus, that is, a single vowel or a single diphthong or
triphthong, is the phonemic minimum of an Ainu morpheme: e yes, ay arrow, yay reflexive prefix.

Ainu morphemes may also contain an initial and/or final single consonantal margin: ni wood, at rope, pet river.

Ainu morphemes may have more than one vocalic nucleus. The nuclei may occur without consonantal margins: ayay baby.

In addition, the vocalic nuclei of a morphene may be separated by a medial geminate consonant or by certain medial homorganic or non-homorganic clusters: nonno flower, pisne seashore, enka above.

The phonemic shape of isolated morphemes may be expressed in the following formula: $\pm( \pm C, V), \pm( \pm C, V), \pm C, V, \pm C$, where $V$ indicates any vocalic nucleus possible in the given position, $C$ for any consonantal margin, and the sign $\pm$ for the optional occurrence of the following symbol or parenthetical group of symbols.
2.0.2. The phonemic shape of morphemes and morpheme boundaries.--Phonemic and morphemic segmentation (i.e., contours and morphemes) do not coincide in Ainu. The phoneme groupings contained within contours are somewhat less restricted than those contained within morphemes. Thus phoneme groupings of a type found within a contour but not within a morphene of necessity belong to two morphemes and hence are phonological signals of morpheme boundary. These include: vowel clusters ae, ai; consonant clusters (including consonant and semivowel) $\mathrm{pw}, \mathrm{ky}, \mathrm{mn}, \mathrm{nw}, \mathrm{nm}$, ns. However, the phoneme groupings possible within a morpheme may also occur at morpheme
boundaries.
2.1. Phonemic Variability of Morphemes with Regard to Sandhi

This involves three cases of morphophonemic variation in Ainu and no cases of morpheme alternation. However, of the various types of sandhi, only final unilateral sandhi, i.e., only the last phoneme of the first of two contact morphemes affected, is of importance in Ainu.

My Hi informant considers the alternant forms resulting from dissimilation and from the optional cases of assimilation and truncation to be indicative of an older form of speech.
2.1.1. Morphophonemic variations in final sandhi.--All morphemes which have relevant finals in contact within the same contour may be affected. This results in the following types of changes: assimilation, dissimilation, and elision. Furthermore, the case of assimilation may result in a geminate consonant or a homorganic cluster.
2.1.2. Assimilation.--The following case of assimilation is optional in all three dialects. In the Hi dialect the base form is the preferred variant and usually occurs. For the Ho and HS dialects, preference could not be determined, but the base form is somewhat more prevalent.

- $\mathrm{m}>-\mathrm{m}$ before m - and p -: tan this -- tam matkaci this girl, tam-pe this thing.
2.1.3. Assimilation and truncation.--In the HS dialect the following five cases are mandatory; they are optional in the Hi and Ho dialects.

Case 1. -ra>-t before $t-:$ oara completely -- oat ${ }^{n}$ tuye he cut completely.

Case 2. -ro>-t before $t-$ : oro very -- ot feeta very ancient times.

Case 3. -ro>-n before $n$-: ku koro my (lit.: I had) -$k u^{\wedge}$ kon nispa my master.

Case 4. -ru>-n before $n-:$ kuru man -- an ${ }^{n} k n^{n} n e$ it is a man (lit.: is ${ }^{n} \operatorname{man}^{n}$ copula).

Case 5. -ri>-n before n-: asiri new -- asin-no newly.
The next two cases are mandatory in the Hi dialect; their occurrence has not been determined as yet for the other two dialects:

Case 6. hopuni got up (s.) + -pa plural suffix hopum-pa got up (p.).

Case 7. This involves a change in the manner of articulation: amucici scratched (s.) + -pa plural suffix amucit-pa scratched (p.).
2.1.4. Dissimilation.--Two cases of dissimilation occur. The qualifications affecting assimilation are also pertinent here. Morphemes with final -ra have within the same contour sandhi variants dissimilated to final -n before morphemes with initial consonant identical to their non-contact final, while morphemes with final -ro dissimilate to -t before c-: oara thoroughly -- oan ray-ke he

2.1.5. Elision. --The following cases of elision occur:

Case 1. When $-V$ meets $V$ - or is contour final ( $-V$ is any syllabic vowel or semivowel while $V-$ is any syllabic vowel), $-V$ may be optionally elided--mosiri world--mosir epitta [the] whole world. One instance of elision is mandatory in the Hi dialect but never occurs in the Ho dialect; in the HS material it occurred only once: $k u \quad I>k$ before $V-\ldots k^{\cap} \mathrm{ek}$ I came.

Case 2. -ra, -ro, -ri final verbs which form the causative and/or transitive by the addition of $e$ elide final $-V$ before $e$ : koro possessed $+e>$ kor-e gave.
2.1.6. Elision and truncation.-- -n final verbs which form the plural by the addition of $-p a$, plural suffix, elide $-n$ to $-p ;$ in addition, -pa>-p -- ahun entered (s.) + -pa>ahu-p entered (p.).

### 2.2. Truncation

Three mandatory cases of truncation occur--case 1 and case 2 involve suffixes while case 3 involves verbs:

Case 1. pe article, thing >-p after $V--$ poro-p large thing. The only exception is kư koro-pe my thing(s) (lit.: Ihad-thing(s)).

Case 2. niw person>-iw after $n$; after $V$ niw>-n--wan-iw ten persons, tu-n two persons.

Case 3a. -a, -i, -u: final verbs which form the plural by the addition of -pa, plural suffix, drop their final $-V$ when -pa is added -- hosipi returned (s.) + -pa>hosip-pa returned (p.).

Case 3b. Certain -e final verbs which form the plural with -pa also drop final -V when -pa is added -- tuye cut (s.) + -pa>tuy-pa cut (p.).

A case of optional initial truncation occurs:
Case 4. otutanu $\infty$ tutanu next, second.

### 2.3. Linking Semivowel

One case of a linking semivowel occurs: when morpheme $u$ is added to $V$-initial words, a linking or intrusive $w$ sometimes. occurs: $u$ mutuality prefix $+e-m i n a$ laughed at u-we-mina they laughed at each other.

### 2.4. Reduplication

Two cases of reduplication occur--full and partial.
Case 1. This involves full reduplication of the verb theme:
ekn ${ }^{\wedge}$ he kept on coming.
Case 2. This involves the addition of $h$ before the reduplicated final syllabic vowel of certain noun themes which terminate in an open syllable: pe water -- pehe drop of water; hawe, hawehe voice.

### 2.5. Morpheme Alternation

The following cases of morpheme alternation occur:
Case 1a. Full suppletion occurs in the plural form of certain verbs -- $\operatorname{arapa}$ (s., Hi), oman (s., Ho. HS), paye (p.)went.

Case 1b. Partial suppletion may occur in the plural form of
certain verbs -- uk (s.), uyra (p.) took.
Case 2. ku $I$ has the following allomorph: en me --
en-kasuy he saved me (lit.: me-he-saved).
Case 3. un, $i$ are two forms of us--un-pa, i-pa, he found us (lit.: us-he-found).

CHAPTER III

MORPHOLOGY
3.0. The distribution frame of Ainu morphology is the analytic word (as opposed to the informant word). It was not possible to define the word by the fixed order test--that is, determining whether or not any pair of adjacent morphemes or morpheme clusters within an informant word can be inverted--due to the fact that the Ainu language does not contain consistently ordered strings of morphemes or morpheme clusters. Furthermore, canonical form also is not a defining criterion.

Ainu morphemes, however, may be divided into two types: thematic and paradigmatic. Thematic morphemes are words and are defined by the fact that they are units which 1) are either independent (verbs, copula, adverbs, nouns, pronouns, numerals, and adnouns), 2) unilaterally dependent on an entire clause (particles), or 3) bilaterally dependent on two clauses (conjunctions).

In addition, a few thematic morphemes may be termed morphemic components. These are units which are separable in form but do not have an identifiable meaning portion or portions.

Conversely, paradigmatic morphemes are non-words and are defined by the fact that they are units which are in a unilateral dependence relation with another unit. They may be subdivided into the classes of prepositions and postpositions.

In unilateral dependence, $X$ requires $Y$ but not vice versa. In bilateral dependence, $X$ requires $Y$ and $Z$ but not vice versa. A hyphen (-) between two units indicates the unilateral dependence of one upon the other.

The paradignatic morpheme classes are of restricted membership, and an exhaustive listing of their individual members is thus possible. For the thematic morphemes, a complete listing is possible for the following: copula, particles, conjunctions, and certain subclasses of pronouns. For the remaining classes of thematic morphemes exhaustiveness means mere exemplification, without complete listing, of individual members.

Although I have attempted on exhaustive listing of the membership of the restricted classes, it is possible that some class members may be missing. If this is the case, I will include them in a future definitive treatment of Ainu grammar.

The noun may, and very often does, occur without a dependent paradigmatic morpheme. The verb, however, seldom occurs without a dependent non-word, although it may so occur. In addition, noun phrases and verb phrases often function as nouns and verbs, respectively. Thus, of necessity, certain syntactic units are discussed in the morphology; because of this and the fact that a syntactic analysis will not be presented, I will briefly outline what are tentatively considered to be some of the salient aspects of Ainu syntax.

The grammatical system of Ainu consists of the following analytic units which do not occur in an orderly progression but rather fuse one into the other: morpheme, word, phrase, clause, sentence,
paragraph, discourse. Each unit at a higher level is composed of lower level units defined by external function and internal structure; only the morpheme is allowed as a primitive term. In a full grammatical treatment, all the units up to and including the sentence would be included in the description. Above the sentence we enter the realm of stylistics.

Putative phrase types in Ainu are: verb phrases, copula phrases, adverb phrases, noun phrases, pronoun phrases, numeral phrases, and adnoun phrases, with various subclasses of each.

The clause functions that are tentatively considered pertinent tc Ainu are: a subject function, a predicate function, a direct object function, an indirect object function, and a complement function. An unmarked noun may function within the clause as a subject or object; the verb or verb phrase usually comes at the end of the clause; however, unlike the other clause functions, the predicate function does not depend on any other clause member for its function, that is, the predicate function is not in a unilateral dependence relation of either occurrence or function on any other unit within the clause. Therefore, if the clause-final verb phrase is, through dependence relations, considered the most important part of the analytic sentence, the grammatical emphasis in Ainu may be tentatively labelled cumulative with the prior elements adding various pieces of information to the main verb.

My use of dependence relations in the definition of the word has made it advantageous to consider the terms postposition and suffix equivalent; the same is true for the terms preposition and prefix.

However, the concepts which the terms postposition and suffix, for example, imply are often considered quite distinct. Nevertheless, with regard to Ainu grammatical structure, I believe that I an justified in the approach which $I$ have used and that those semantic differences which occur with respect to the previously named terms are clearly delineated.

In the following outline, I have tried to use as many examples similar to John Batchelor's as possible for the benefit of the reader whe may wish to compare my treatment of the morphology with his. However, due te corpus restrictions and our different approaches, this has not always been feasible.

### 3.1. Part I: Thematic Morphemes

3.1.1. The verb.--Internally, the verb is defined by the paradigmatic morphemes that depend on it; externally, by its function as a predicate in clauses. The unmodified verb theme indicates past time and third person singular or plural. At times, however, the context and/or words with a present meaning occurring with the verb require that the verb be translated as a present form.

Verb auxiliaries. The auxiliaries which are in a unilateral dependence relation upon the verb and which serve to indicate time and mode include the following:
a. korcan, koran indicates that an action is in progress -- ek-koran he is coming.
b. siri, sirine ( $\mathrm{Hi}, \mathrm{HS}$ ) indicates that an action is in
progress -- ek-sirine he is coming.
c. kusune indicates future time -- ek-kusune he will come.
d. nankoro indicates future probability -- ek-nankoro he will probably come.
e. nisa indicates a finished past action -- ek-nisa he came.
f. okere (Hi) indicates a finished past action --ek-okere he came.
g. awa indicates an insistive past -- ek-awa he came, you know!
h. kusunea ( Hi ) indicates that one has to or ought to do something -- ek-kusunea he ought to come.

The following are independent verbs which usually function as auxiliaries:
a. aeramusinne is a verb which means was satisfied and which indicates past time and contentment with verbs of eating and drinking -- ipe aeramusinne I have eaten (and am content).
b. rusuy is a verb which means wished and which indicates desire when following other verbs -- ek rusuy he wanted to come.

In addition, verb reduplication may occur to indicate frequency -- ek ek he kept on coming.

The imperative. The imperative is formed by adding yan to the verb theme -- apkas-yan walk! (s. and pl.).

The passive. Individual and/or stylistic reasons, rather than structural, seem to determine the use of the passive. It is formed by the morpheme a with allomorphs a- $\sim$-an. -a occurs with the first and second persons, singular and plural, while -an occurs elsewhere:

```
a- + en me + verb -- first person, singular, passive.
personal pronoun + verb + -an -- second person, singular,
        passive.
a- + verb -- third person, singular, passive.
a- + un us + verb -- first person, plural, passive.
personal pronoun + verb + -an -- second person, plural,
        passive.
a- + verb -- third person, plural, passive.
An example of a verb inflected in the passive is the
```

following:
a-en-nu I was heard.
e nu-an you (s.) were heard.
a-nu he was heard.
a-un-nu we were heard.
eci nu-an you (pl.) were heard.
a-nu they were heard.

Plural verbs. Some verbs occur with a plural form when the subject and/or object of the verb is plural (transitive verbs) and
some when the subject only is plural (intransitive verbs); the plural form may be entirely different than the singular, or it may be formed by the addition of -pa $\sim-p$.

There is no rule whereby one can determine whether or not a verb will have a plural form or how this plural form will be constructed.

The following are the verbs in my corpus with a distinct plural form:

| Singular |  | Plural |
| :---: | :---: | :---: |
| a | sat | rok |
| ahun | entered | ahu-p |
| akonere | smashed | akonere-pa |
| amucici | scratched | amucit-pa |
| ani | carried a big thing | am-pa. |
| anu | 1eft a single (many) thing (s) on one side | amke |
| arapa, arupa (Hi) | went | paye |
| as | came down | as-pa |
| asinke | extracted germs | asinke-pa |
| aste | set up | roski |
| asip | came out | asip-pa |
| ek | came | ariki, araki |
| eok | struck against | eokok |
| heasi | began | heas-pa |
| hekatu | was born | hekat-pa |


| Singular |  | Plural |
| :---: | :---: | :---: |
| hekomu | returned | hekom-pa |
| hepirasa | blossomed | hepiras-pa |
| hetuku | came forth | hetuk-pa |
| hopuni | got up | hopum-pa |
| hosipi | returned | hosip-pa |
| hotuye | yelled | hotuy-pa |
| hoyupu | $\underline{\text { ran }}$ | hoyup-pa |
| koro | possessed | koro-pa |
| oman (Ho, HS) | went | paye |
| ray-ke | killed | ronnu |
| ran | descended | ra-p |
| resu | reared | res-pa |
| san | descended | sa-p |
| suwe | cooked | suke-pa |
| tuye | cut | tuy-pa |
| uk | took | uyna ( Hi ) |
| yan | ascended | ya-p |
| yasa | split | yas-pa |
| Causative and transitive forms. Verbs can be grouped into |  |  |
| certain subclasses according to the way in which they form the |  |  |
| causative and/or transitive. Mere inspection cannot determine int |  |  |
| which subclass a verb will fall. |  |  |
| Subclass 1. ka suffix verbs include: |  |  |

annihilated, did away with.
b. iwnin suffered pain; iwnin-ka punished someone (without drawing blood).
c. kotuk touched; kotuk-ka stuck on.
d. mom floated; mom-ka sent adrift.
e. us went out (like fire); us-ka made to go out,
extinguished.
f. uhuy burned; uhuy-ka made to burn.

Subclass 2. ke suifix verbs include:
g. ahun entered; ahun-ke caused to enter, sent in,
put in.
h. ray died; ray-ke killed.
i. ran came down; ran-ke let down.
j. san descended; san-ke caused to descend.
k. sat was dry; sat-ke dried it.

1. yan ascended; yan-ke caused to ascend; took up, out.

Subclass 3. te suffix verbs include:
a. as stood, rained; as-te set up, caused to rain.
b. at shone; at-te caused to shine.
c. cis cried; cis-te caused to cry.
d. esirikopas leaned against; esirikopas-te caused to
lean against, set against.
e. oman (Ho, HS) went; oman-te made to go, sent away.
f. rikin climbed; rikin-te made to climb.

Subclass 4. re suffix verbs--group a occurring with re suffix only and group $b$ occurring with one of the previous suffixes and re. These include:

Group a:

1. $\left.\begin{array}{l}\text { e } \\ \text { ipe }\end{array}\right\} \quad$ ate; $\underset{\substack{\text { e-re } \\ \text { ipe-re }}}{\}}$ caused to eat, fed.
2. arapa went; arapa-re sent.
3. hetuku was promoted; hetuku-re caused to be pro-
moted.
4. iku drank; iku-re caused to drink.
5. ki did; ki-re caused to do.
6. oma went inside; oma-re put inside.
7. ru melted; ru-re melted something.
8. sikkasima left aside; sikkasima-re caused to leave
aside.
9. ta dug, drew water; ta-re caused or let someone
dig or draw water.

Group b:

1. ahun-ke sent in; ahun-ke-re caused to be sent in.
2. as-te set up; as-te-re made someone wait.
3. san-ke sent down; san-ke-re caused to send out,
let out.

Subclass 5. Some verbs ending in -ra, -ro, -ri replace final vowel with e. These include:
a. eysokoro made true; eysokor-e caused to make true.
b. haciri fell down; hacir-e threw down, made to fall
down.
c. kara made, did; kar-e caused to make, do.
d. koro possessed; kor-e gave.
e. mokoro slept; mokor-e put to sleep.
f. nukara saw; nukar-e shown.

Subclass 6. Some verbs with prefix e. These include:
a. kira ran; e-kira ran away with.
b. mik barked; e-mik barked at.
c. mina laughed; e-mina laughed at.
3.1.1.6. Verb derivation. Verbs may be derived fro vords of other classes in the following ways:

1. by prefixing $e$ to certain adnouns;
hapuru soft; e-hapuru was unable to endure.
niste hard; e-niste was able to endure.
2. by suffixing ka to certain nouns, adnouns, and adverbs:
hure red; hure-ka dyed red.
moyre slow; moyre-ka slackened speed.
nam cold; man-ka made cold.
nisap quick; nisap-ka quickened.
3. cak without, lacking may be added to certain nouns:
kat heart, mind; kat-cak was weak, timid.
There is no rule by which these words of other classes can be determined, and consequently, they are ascertained only through informant and text-based elicitation.

## The Copula

3.1.2. The Ainu copula may be divided into two subclasses-1. an and 2. ne, both of which often indicate present time. They are not considered verb subclasses because their internal structure differs from that of the verb. In my corpus an occurs much more frequently than ne.

The semantic range and different copula functions of an and ne are illustrated by the following examples:

1. an may be used:
a. in questions with he a question particle--ek ruwe he an has he come? (lit. came insistive-particle question-particle copula).
b. in a locative sense--teta an he is here (lit. here copula).
c. with kane (while)...ing--tekehe-otta sumi ani-kane an he is holding rocks in his hand (lit. hands-in rocks held-...ing copula).
d. as the verb "to be"--tanto wen sikus an today the weather is bad (lit. today bad weather copula), kuani katuhu an $I$ am in this disguise (lit. I form copula).
2. ne may be used:
a. in an existential sense--an kuru ne a man is (there) (lit. copula man copula).
b. in a qualitative sense--kuani aynu ku ne I am an Ainu (1it. I Ainu I copula).
c. in idioms without a verb--hempara ne-yakka at any time, always (lit. when copula-although) .
d. in idioms with a verb--sine-n ne ma to swim by one's self (lit. one-person-postposition copula swam).
e. as the verb "to be"--tan ku koro-pe ne na this is my thing (lit. this I had-thing copula conclusiveparticle).

## The Adverb

3.1.3. The postpositions -no and -tara serve as internal defining criteria of certain adverbs, while clause complement function and function in adverb phrases serve as the external defining criteria of all adverbs.

Certain adverbs may be formed by:

1. The postposition -no plus certain adnouns:
asiri new, asin-no newly.
hosiki previous, hosiki-no previously.
2. the postposition -tara plus certain adnouns:
moyre slow, moyre-tara slowly.
ratci gentle ratci-tara gently.
The adverbs formed in these ways can only be ascertained
through informant and text-based elicitation.
Some common postposition-free adverbs include: hanke near;
hempara when; ikusta beyond; ine where; kesto daily; na, naa more; nep-kusu why; nitan fast; numan yesterday; pakno sufficient; patek only; ramma always; rikta above; samata
beside; somo not; taanta here; tane now; tanto today; teeta long ago; toanta there.

The Noun
3.1.4. The noun is defined internally by the paradigmatic morphemes unilaterally dependent on it and externally by the clause functions of subject and object and by function in noun phrases.
3.1.4.1. Noun formation. Nouns may be formed by:

1. Compounding:
a. A noun + a noun--to female breast + pe liquid > tope milk.
b. A verb + a noun--uhuy burned + nupuri mountain > uhuynupuri volcano.
2. A verb $+-p e$ thing--e ate $+-p e>e-p$ food;
a-ye was said + -pe > a-ye-p the thing said.
3. A verb + -i--yaynu was ill + -i > yaynu-i illness.
4. An adnoun + -pe--poro large + -pe > poro-p large thing.
3.1.4.2. Noun plurality. Plurality is ordinarily indicated by context; occasionally, however, utara, utari (persons, people) is used.
kuru man or men, kuru utara men.
Two nouns with their own optionally used plural form also occur:

$$
\begin{aligned}
& \text { cep fish (s. and pl.), cep-nu fish (pl.) } \\
& \text { nis cloud, clouds, nis-u clouds. }
\end{aligned}
$$

3.1.4.3. Gender. pinne male (non-human), okkay, okkayyo male (human), and matne female may be used, but seldom are, to specify gender:
seta pinne male dog
seta matne bitch
kamuy okkay male god.
3.1.4.4. Diminutives. Diminutives may be formed by the postposition -po.
seta dog, seta-po puppy
cikap bird, cikap-po small bird.

## The Pronoun

3.1.5. Externally, the clause functions of subject, object, and complement, as well as function in pronoun phrases, define the pronoun. Furthermore, the pronoun may be divided into the following subclasses:

### 3.1.5.1. Personal pronouns.

First person singular: kuani, ku (standard), cokay (informal), kani (slang) I; en me (en is a bound allomorph occurring when kuani is an object).

Second person singular: e, eani (standard), sinuma (expresses contempt) you.

Third person singular: tan kuru (lit. this person, (HS) this man), tan aynu (1it. this person, this man) he/him, she/her.

First person plural: ci, ci utara (lit. we people), ci
okay (lit. we are), (HS) ci okay utara/utari (lit. we are people), as (only after intransitive verbs) we; un, $\mathbf{i}$ (bound allomorphs, occurring when ci is an object) us.

Second person plural: eci, eci okay (1it. you are), eci utara (lit. you people), eci okay utara (1it. you are friends, polite), (HS) an utari (lit. are friends, polite)--you.

Third person plural: tan utara (lit. these people), toan utara (lit. those people), tan okay utara (lit. these are persons), ney utara (lit. those people (close by)), to okay utara (lit. there are people (far away)), ney okay utara (those are persons, polite)--they/them.
3.1.5.2. Impersonal pronouns.
tam-pe (lit. this thing); tan okay-pe (lit. these are things); toan okay-pe (lit. those are things); ney okay-pe (those are things (close by)) ; to okay-pe (there are things (far away))-it, that is, this, that thing/these, those things.
3.1.5.3. Possessives. Possessives are formed by adding koro had, possessed, to the personal pronouns and to $a$ in the case of your (s. and pl.).

Examples are: ku koro my; e-koro, a-koro your (s.); toan kuru koro his/her; ci koro our; eci koro, a-koro your (pl.); toan okay utara koro their (far away) ; tam-pe koro its. If there is no ambiguity, however, the personal pronoun by itself can indicate the possessive.
3.1.5.4. Relatives. The relatives include the following words: sekore who, that, which; ani that.
3.1.5.5. Interrogatives. The interrogatives are: hemanta what; hempara when; hunna who; hunnak where; inam-pe which thing; inan which; ine where; makanak (Hi) how; nekon, nekona (Ho, HS) how; nen, nenta who; nep what; nep-kusu why (lit. because what).
3.1.5.6. Indefinites. The indefinites include: moyo few; nenka someone, somebody, no one; nep, nepka something; nen ne-yakka (lit. who is-if), nen ne kuru ka (lit. who copula man even) anyone, anybody, everyone, everybody, whosoever; nen nen ne-yakka (lit. who who copula-if), nep ne-yakka (lit. something copula-if), nep nep ne-yakka (lit. something something copula-if) anything, whatever, whichever; sine-n one (person); usinna each.
3.1.5.7. Reflexives. The reflexives are: yay-kata, yay-kota one's self; sine-n ne po (by) myself (lit. one-person copula child); sine-n ne (by) itself (1it. one-person copula); eani (e) yay-kota (by) yourself (lit. you (you) one's self); ney kuru yay-kota him;/ herself (lit. that person self).
3.1.5.8. Demonstrative. The demonstratives include: tan, taan this these; toan, taan that, those; tan okay this, these (lit. this exists (close by)) ; tan-pe this, that, these, those (iit. this, that thing (close by)); toan-ta okay that, those (lit. thatthere exists (at a distance)); toan-pe this, that, these, those (lit.
this, that thing (at a distance)).

The Numeral
3.1.6. Of all areas of the Ainu language, the one with the earliest and most complete replacement by Japanese is the numeral system. The reasons for this have no place in a synchronic sketch, but it does explain the gaps which exist. The counters, one of which usually occurs with the numeral theme, are: pe article, thing; niw person; pis thing, person; ikinne ordinal counter; and tunku hundreds and thousand counter.

The counters are tentatively considered mutually exclusive since no example which would modify this statement was collected. They serve as the internal defining criteria of the numerals, while clause complement function and function in numeral phrases serve as the external defining criteria.

The following are all the data on numerals that $I$ collected:

1 sine-

2 tu-

3 re-
4 ine-
5 asikne-; asik (five things)
6 iwan
7 arawan- (Hi), aruwan- (Ho, HS), ariwan- (HS)
8 tupesan-; tupes (eight things)
9 sinepesan-; sinepe (nine things)
10 wan-

11 sine ikasima wan- (lit. one plus ten)
12-19 follow the same pattern as 11
20 hotne-, hot (twenty things)
21 sine hot, sine ikasima hot (1it. one plus twenty)
22-29 follow the same pattern as 21.

My informants could not supply any native Ainu words for the odd-digited multiples of ten such as $30,50,70$ and 90 , not because they forgot them but because, to their knowledge at least, they never existed. In fact, above ten the informants seldom used the Ainu number morphemes. Odd-digited multiples of ten, however. could be formed by phrases such as wan e tu hot ten from $O$ forty (things) to mean 30 (things).

1,000 hot-tunku (Ho) (things)
$1^{\frac{1}{2}}$ etu (lit. from two)
$2 \frac{1}{2}$ e re (lit. from three)
ikinne is the ordinal counter; (o)tutanu next may also be used with the numbers one and two.
first sine-ikinne, sine (o)tutanu
second tu-ikinne, tu (o)tutanu
third re-ikinne, iye e re-ikinne (lit. put-together from third)
fourth ine-ikinne, iye e ine-ikinre (lit. put-together from fourth)
fifth-tenth follow the same pattern as third and fourth.
suy, suyne again is the counter for times, but suyne only occurs with (o)ara one of two.
once (o) ara suy/suyne (lit. one again), asuy
twice tu suy (lit. two again)
three times re suy (lit. three again)
four times-ten times follows the same pattern as twice and three times.

Both is expressed by uren:
uren cikiri both legs.

One of a pair or one side of something is expressed by
(o)ara.
(o) ara siki one eye (of two).

One-by-one, two-by-two, etc., are expressed by reduplication or by ranke.

ko is the counter for days, except for the first day where to day is used:

| one day | sine to |
| :--- | :--- |
| two days | tut-ko |
| three days | rere-ko |

## The Adnoun

3.1.7. The morphemes $u s$ and sak postposed to nouns serve as internal defining criteria of certain adnouns, while clause complement function and function in adnoun phrases sexve as the external defining criteria of all adnouns.

Certain adnouns are formed by:

1. us became + certain nouns:
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kem blood + us, kem us bloody (lit. blood became)
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2. when sak non-existent is added to certain nouns adnouns with a negative connotation are formed: ramu mind + sak, ramu sak foolish (lit. mind non-existent

The adnouns formed in this manner are ascertained only through informant and text-based elicitation.

Some common adnouns are:
asiri new; askanne clean; atomte beautiful, neat;
hapuru soft; husko old; hutne (HS) narrow; icakkere dirty; ipokasi ugly; katcak weak; kera sweet; mo guiet, gentle; moyre slow; nam cold; nucak happy; nupetne joyful; nokan small, little; pirika good, pretty; pon little, small; poro large; ram low; ratci guiet, gentle; ri high; ru broad; sep broad, wide; tanne long; tumasnu strong; tunas quick; tuyma far; wen bad.
3.1.7.1. Plurality. A plural connotation to adnouns is imparted by the postposition -pa.
pirika good, pirika-pa all are good
pon small, pon-pa all are small
3.1.7.2. Comparative and superlative. The comparative and
superlative are formed with na more and iyotta most:
pirika good, na pirika better, iyotta pirika best.

Than comparatives may be formed in the following ways:

1. with akkari than:
e akkari ku nitan ruwe ne I am faster than you (1it. you
than I swift insistive-particle copula).
2. with akkari and easirika certainly: ya akkari rep-anak ne easirika poro ruwe ne the sea is greater than the land (lit. land than sea-noun-postposition-iridicatingsubject copula certainly larger insistive-particle copula).
3. with akkari and eytasa more: toan kotan akkari tan kotan-anak ne eytasa hanke an kotan ne ruwe ne this village is nearer than that village (lit. this village than that village-noun postposition-indicating-subject copula more near copula village copula insistive-particle copula).
4. with akkari and maskino too: umma akkari isepo maskino nitan ruwe ne a horse is faster than a rabbit (lit. horse than rabbit too swift insistive-particle copula).
5. with akkari and na more: en-akkari eani na siwente you are slower than I (lit. me-than you more slow).
6. with kasuno more:
en-kasuno e ri ruwe ne you are taller than I (1it. me-more
you tall insistive-particle copula).

The Particle
3.1.8. The particle is defined by a unilateral dependence relation on the whole analytic unit with which it occurs.

The following particles occur in my corpus:

1. a, ya-question particles in free variation: pirika ya, pirika a is it good? (lit. good question-particle).
2. he--a question particle preceded by a verb or a verb + ruwe (insistive particle) and usually followed by the copula an: nep kusu ariki ruwe he an why have you (pl.) come? (lit. what because came insistive-particle question-particle copula).
3. ruwe--an insistive particle which often gives an affirmative emphasis to what one is saying and is usually followed by the copula ne: ek rusuy ruwe ne he wanted to come, you know! (lit. came wished affirmative-particle copula), pirika ne ruwe ne it's good, you know! (lit. good copula affirmative-particle copula).
4. na--a conclusive particle which indicates that an utterance is completely finished: tane ku arapa na I'm going now (lit. now I went conclusive-particle).
5. tapan--a conclusive particle, less forceful than na, indicating that a statement is finished: ek rusuy tapan he wanted to come (lit. came wished affirmative-particle).

As the last three particles are not mutually exclusive, their order of occurrence is: ruwe, tapan, and na--nep kusu henne pon okkay nep kusu henne pon menoko henne ek ruwe tapan na why aren't the boys and girls coming? (lit. what because not small male what because not small female not came insistive-particle conclusiveparticle conclusive-particle.

## The Conjunction

3.1.9. Conjunctions are defined via a bilateral dependence relation on the two analytic units with which they may occur. There are two subclasses of conjunctions--simple and correlative.

1. The simple conjunctions include: wa and with verbs; in the absence of any aspect auxiliary, we may give a present time connotation to the first of the two verbs with which it occurs -- aynu itak nu rusuy wa ek he has come wishing to hear the Airu language (lit. Ainu language heard wished and came).
newa and with nouns -- mici ncwa hapo father and mother.
koroka but, however -- $k-e k$ koroka ku nukara somoki $I$ came, but I didn't see (lit. I-came but I saw not).
ora (Hi), orowa (Ho) then -- aynu hekaci pa-koro ora
hekaci nospa when the men found the boys, (then) they followed them (lit. men boys found-when then boys followed).
ya or with questions -- ek ya somo ya has he come or has he not? (lit. came or not question-particle).
2. The correlative conjunctions include:
hemem...hemem both...and -- mici hemem hapo hemem ariki both father and mother came (1it. father both mother both came).
hene...hene either...or -- e hene kuani hene nu-nankoro either you or me will probably hear (lit. you either I or heard probably-wi11).
ka...ka both....and with an affirmative statement,
neither...nor with a negative statement--eani ka kani ka ariki both you and me came (lit. you both I both came); eani ka somo kani ka somo ipe neither you nor me ate (lit. you neither you nor I nor not ate).
newa...newa both...and--hekaci newa matkaci newa ipe rusuy both the boys and the girls wished to eat (1it. boys both girls and ate wished).
neyakka...neyakka both...and--hapo neyakka mici neyakka i-nu-koran both mother and father are listening (lit. mother both father and intensifying-prefix-heard-present-auxiliary).
yakka...yakka whether...or--apkas yakka umma o yakka k -ek-nankoro whether I walk or ride a horse, I'll probably come (1it. walked whether horse rode or I-came-probably-will).

## Morphemic Components

3.2.0. As stated in the introduction to the morphology (p.27) units which are separable in form but do not have an identifiable meaning portion or portions occur in Ainu. Thus, in regard to full identification of their internal structure, these morphemic components are indeterminate marginal cases. Their assignment to word classes is, therefore, based mainly on exterral function. Throughout this outline morphemic components are written as one word, but in the following examples a hyphen (-) separates the parts without implying a dependence relation of any type.

Examples include:
heka-ci or he-kaci boy; matka-ci or mat-kaci girl;
heka-ttar or he-kattar children.

### 3.3. PARADIGMATIC MORPHEMES

The Preposition
3.3.1. Prepositions are defined via a unilateral dependence relation upon the word which follows them. They may be divided into three subclasses according to whether they occur with verbs, nouns, or adnouns. Prepositions that occur with nouns are mutually exclusive and have semantic rather than morphologic restrictions of occurrence. Prepositions that occur with verbs, on the other hand, are restricted both morphologically and semantically. In addition, the verb prepositions may be divided into subsets on the basis of a formal distinction--position in regard to the verb theme. Each preposition is mutually exclusive with any other in its own subset.

Due to the paucity of agglutinated units of any degree that occurred in both informant and text-based elicitation, it was not possible to make a definitive statement as to position, even assuming that all the members of the restricted preposition class have been discovered. The following grouping, therefore, must be regarded as tentative and subject to modification in the light of new evidence.

In the discussion that follows, prepositions that have already been treated in preceding sections will merely be listed and not exemplified.
3.3.1.1. Verb prepositions

Subset 1.
a. e forms transitive verbs from intransitive ones.
b. he occurs with two verbs in my corpus in the sense of direction--maka opened, he-maka moved one's body backward, pirasa spread, he-pirasa spread out like a flower with the petals inclined inward.
c. ho occurs with one verb in my corpus in the sense of direction--ho-pirasa spread out like a flower with its petals inclined outward.
d. ko forms transitive verbs from intransitive ones.
e. si a reflexive prefix which in my corpus occurs with the same two verbs as he--si-maka bend one's body to the side, si-pirasa (a family or flower) spread itself out.
f. si forms transitive verbs from some intransitives.

Subset 2. i an intensifying prefix--nu heard, i-nu 1istened, heard well.

Subset 3. e before some transitive verbs indicates the preceding noun object--aynu cep e-ikka the man stole the fish (lit. man fish object-prefix-stole).

Subset 4. ko indicates direction to or from--kira ran, ko-kira ran to; etaye pulled, ko-etaye pulled from.

Subset 5. u a mutuality or togetherness prefix-- e ate, u-e we ate together or let's eat together.

Subset 6. a is a passive prefix.

Subset 7. yay is a reflexive or self prefix--tura went accompanied by, went together with, yay-tura went alone, went by himself.
3.3.1.2. Noun prepositions
a. e indicates direction toward--e-pisne to the seashore.
b. o indicates direction from--o-pisne from the seashore.
c. u indicates mutuality or togetherness--ir (i)wak
sibling(s), u-ir(i)wak we siblings.
3.3.1.3. Adnoun preposition. e derives verbs from certain adnouns.

## The Postposition

3.3.2. Postpositions are defined via a unilateral dependence relation on the word which they follow. They can be divided into subclasses according to whether they occur with verbs, adverbs, nouns, numerals, or adnouns. Furthermore, verbs and noun postpositions may be divided into various subsets on the basis of the formal distinction of position in regard to the verb or noun theme.

The restriction which applied to prepositions, that is; a paucity of examples of agglutinated units of any degree, also applies to postpositions; therefore, any grouping into subsets is tentative. Each postposition is mutually exclusive with any other in its own subset.

The verb and noun postpositions include those which have an
easily isolatable meaning of their own as well as those which only affect the meaning of the unit on which they are unilaterally dependent. The adverb, pronoun, numeral, and adnoun postpositions are only of the latter type.

In the following discussion, those postpositions previously treated will only be listed but not exemplified.

### 3.3.2.1. Verb postpositions

Subset 1. pa is a plural indicator.

Subset 2.
a. e is a transitive verb former.
b. ke is a transitive verb former.
c. re is a transitive/causative verb former.
d. te is a transitive/causative verb former.

Subset 3.
a. nu indicates ability--ek-nu I can come.
b. yara is a reflexive indicator in the sense of let
yourself be..., i-nu-yara let yourself be 1istened to (lit.
intensifying-preposition-heard-reflexive-postposition).

Subset 4.
a. koroan is a present time indicator.
b. sirine is a present time indicator.
c. kusune is a future indicator.
d. nankoro is a future probability indicator.
e. nisa is a completed past action indicator.
f. okere (Hi) is a completed past action indicator.
g. awa is an insistive past indicator.
h. kusunea (Hi) indicates that one has to or ought to do something.

Subset 5.
a. ayke--as, ku ye-ayke a-en-nu as I spoke, I was heard (1it. I spoke-as passive-preposition-me-heard).
b. ciki--if, ku ek-ciki... if I came... (lit. I came-
if).
c. hike--if, ku nu-hike... if I heard... (lit. I heard-if).
d. itta--when, k-ek-itta ku nu when I came, I heard (lit. I-came-when I heard).
e. ko--if, when, ku ek somoko-ko wen ya is it bad if I
don't come? (1it. I came not--if bad question-particle).
kane -- while ...ing, ek-kane ku ipe while coming,
I ate (lit. came-(while)...ing I ate).
koro -- while ...ing ipe-koro ku nu while eating, I
heard (1it. ate-(while)...ing I heard).
koroka -- although, ku kik kik-koroka pirika ya
although I keep on hitting is it all right? (lit. I hit hit-although good question-particle).
kuni -- in order to, in order that, for, cas-kuni
can run (the name of a race horse) (lit. ran-in-order-to).
kusu -- because, in order to, tasum-kusu ratci-tara
k-arapa I went quietly because I was sick (lit. am-sick-because quiet-adverb former I-went). mosima -- except, besides, but, en-mosima except for me (lit. me-except).
kusiki, kuski -- indicates that someone was or is about to do something, ek-kuski he is about to come.
ora -- in to, Satporo-ora $\mathrm{k}-\mathrm{ek}$ I came to Sapporo
(lit. Sapporo-to I-came).
orowa, orowano -- after, and then, tasum-orowa ray
wa-isam he died after he was sick (lit. is-sick-after died and-is not).
pakno -- until, ek-pakno ku tere-koran I am waiting
until he comes (lit. came-until I waited-present-time-auxiliary).
yak, yakun -- if, arapa-yak pirika it may be good to go (1it. went-if good).
yakka -- even if, although, ney kuru ek-yakka somo ku nukara although the man came I did not see him (1it. that man camealthough not I saw).
3.3.2.2. Adverb postpositions
a. ka is a verb former.
b. no is an adnoun former.
3.3.2.3. Noun postpositions

Subset 1.
a. ani, ari by means of -- makiri-ari aynu ray-ke (or
makiri-ani aynu ray-ke) he killed a man by using a knife (lit. knife-
by-means-of man died-transitive-forming-postposition).
b. ka is a verb formative.
c. nu is a plural marker with cep fish.
d. okari around, instead of -- pet-okari ek he came around the river (lit. river-around he came), en okari ek he came instead of me (lit. me-instead-of he came).
e. orowa from -- en-orowa oman he went from me (lit. me-from he went).
f. ora in, to -- Mopet-ora ku ek I came to Mopet (lit.

Mopet-to I came).
g. orun in, to (Ho, for) -- pet-orun in the river, Satporo-orun $k$-arapa I went to Sapporo (lit. Sapporo-to I-went), nupuri-orun hemesu-kusu ku kara I made it for mountain-climbing (lit. mountain-for climbed-in order I made).
h. otta in, into, to (otta wi.th nu means heard, asked about, of); toan kuru cise-ott an ya is he in the house (lit. that man house-in copula question-particle); toan kuru en-otta ek he came to me (lit. that man me-to came); en-otta nu he asked aboüt me or ask me (1it. me (-about) (-of) asked).
i. po is a diminutive marker.
j. sak forms adnouns.
k. ta at, in, to -- cise-ta ckay they were in the house (lit. house-in dwelled); Satporo-ta ek he came to Sapporo (lit. Sapporo-to came).

1. tonoke is an endearment suffix -- ak-tonoke my dear younger brother.
m. $u$ is a plural marker with nis cloud.
n. us forms adnouns.
o. un is a locative indicator -- kim-un located in the vicinity of the mountain.
p. un towards, to aynu-un ek he came towards the man (lit. man-towards came).
q. wa, wano from -- pis-wa k-ek I came from the beach (lit. beach-from I came).

Subset 2. anak is a subject indicator -- aynu-anak... as for the man... (lit. man-subject-indicator).
3.3.2.4. Pronoun postpositions
a. anak is a subject indicator -- kuani-anak... as for me... (lit. I-subject-indicator).
b. un is an affirmative indicator -- kuani-un it's I (lit. I-affirmative-indicator).
3.3.2.5. Numeral postpositions
a. ikinne is a counter for ordinals.
b. ko is a counter for days.
c. niw is a counter for human beings.
d. pis is a counter for human beings and things.
e. tunku is a hundreds and thousand counter.
3.3.2.6. Adnoun postpositions
a. ka is a verb formative.
b. no is an adverb formative.
c. pa is a plural marker.
d. pe is a noun formative.
e. tara is an adverb formative.

CONCLUSION

Now that some of the essential structural details of the Hokkaido Ainu language have been presented, I would like to take this opportunity to discuss the Ainu in general. I do not think that I will be accused of bias when I state that, both ethnographically and linguistically, the Ainu are one of the most important groups in the world today. Various factors contribute to this view, viz., the geographical position of the Ainu in regard to other groups in northern Asia, their ethnological, but not necessarily linguistic ties to the various Paleo-Siberian groups such as the Chukchee, and the enigma surrounding the original homeland and possible migration routes of the Ainu.

A full and detailed knowledge of all aspects of the language and culture of the Ainu and the Paleo-Siberian peoples would shed much light on the previous problems, but, with the rapid disintegration of the native cultures and the present-day political situation hampering a great deal of ethnographic and archeologic investigation in Siberia and in the Kurile and Sakhalin Islands, linguistics seems to offer the best avenue of approach. The fact that so little, I am tempted to say no, sound synchronic linguistic information is easily available on Ainu is rather surprising. The many any varied factors which often are a stumbling block to much anthropological linguistic investigation such as no easy access to informants, tabus against
divulging the secrets of the language, a reticence on the part of informants, do not exist for Ainu. There are, it is true, fery good speakers of Hokkaido Ainu, but they are easily accessible, outgoing and friendly, and pleased and honored to give information about their language. Thus, the conditions under which the language may be investigated are not such as to deter even the most adamant armchair 1inguist.

In the realm of ethnolinguistics, the Ainu have a plethora of terms for bears which must be studied and analyzed. The vocabulary in regard to the sea, fishing, and fish, is also quite extensive and may provide valuable clues in regard to the origin of these people.

The Ainu also have many songs and chants as well as a form of epic sung, chanted, and spoken called the yukar which has been handed down for many generations. Some yukar are of short duration--five or so minutes--while others may last as long as an hour or more. To my knowledge, these yukar have never been thoroughly analyzed to see what information they can provide in regard to the older stages of the language and the migration routes of the Ainu.

In the future, I intend to collect as many yukar as possible as well as to examine those already published. With the firm data base which this study will provide, more accurate and detailed statements about Ainu structure in general can be made. Furthermore, Ainu syntax in particular, about which I have said little in this monograph, can be more fully analyzed. My work thus far leads me to surmise that Ainu syntax is quite varied. By varied I mean that Ainu syntax does
-not merely consist of simple, declarative, analytic sentences strung out one after the other but rather that numerous more sophisticated syntactic devices are employed.

The agglutinative tendency of the language which John Batchelor considered typical of Hokkaido Ainu appears to be rapidly changing in the direction of a more isolating type of structure. Whether this tendency is a result of the surcease of the language and the rapid disintegration of Ainu culture or is a result of a drift which would have occurred even in a viable linguistic and social milieu is a question which cannot, at the present, be answered with any degree of certainty.

## APPENDIX I

## TEXT

The following text is based on the reminiscenses of sukup mat (brought-up woman) my 84-year-old Horobetsu informant, who worked for John Batchelor for eight years.

On the first line is (a.) the Ainu text, below that (b.) a morpheme-by-morpheme breakdown, followed by (c.) a literal translation into English, and then (d.) a free translation.

1. a. nep ku ye-ko pirika ya
b. nep ku ye ko pirika ya
c. what $I$ said if good. question particle
d. Is anything I say all right?
2. a. Horobetsu kotan-otta sukup
b. Horobetsu kotan otta sukup
c. Horobetsu village in brought up
d. I was brought up in Horobetsu village.
3. a. tane taan kotan $k u$ an
b. tane taan kotan ku an
c. now this village I copula
d. Now I am in this village.
4. a. ku koro nispa atuy-orowa ciep yanke
b. ku koro nispa atuy orowa ciep yanke
c. I had master sea from fish hauled
d. My husband hauled up fish from the sea.
5. a. kuani-anak ne toyatap oman wa toyta patek
b. kuani anak ne toyatap
c. I subject postposition copula garden plants
b. oman wa toyta patek
c. went and planted only
d. I went and only planted garden produce.
6. a. kuani-anak ne ku po hapo miki samaketa sukup
b. kuani anak ne ku
c. I subject postposition copula I
b. po hapo miki samaketa sukup
c. child mother father next to brought up
d. As a child I was raised beside my mother and father.
7. a. akihi tu-n kagapo sinne-n opitta ray
b. akihi tu n
c. younger brother two person postposition
b. kagapo sinne $n$ opitta ray
c. elder sister one person postposition all dead
d. Two younger brothers and an elder sister are all dead.
8. a. tane kuani sinne-n ne po
b. tane kuani sinne ne ne po
c. now I one person postposition copula child
d. Now I am all alone.
9. a. kuani-anak ku pon ita irara patek
b. kuani anak ku pon ita
c. I subject postposition I little when
b. irara patek
c. naughty only
d. When I was little, I was only naughty.
10. a. miki hemem hapo hemem koro wa a-kopasrota
b. miki hemem hapo hemem koro wa
c. father both mother both had and
b. a kopasrota
c. passive preposition scolded
d. Both my father and mother scolded me.
11. a. tane poro an kusu irara isam
b. tane poro an kusu irara isam
c. now big copula because naughty is not
d. Now, because I am older, I am not naughty.
12. a. kuani anak ne hapo ikasuy monrayke an na
b. kuani anak ne hapo
c. I subject postposition copula mother
b. ikasuy monrayke an na
c. helped work copula conclusive particle
d. I helped my mother with the work.
13. a. toyta wa amam uk wa ipe sito hemem mesi hemem a-kar wa a-e
b. toyta wa amam uk wa ipe
c. planted and garden produce took and ate
b. sito hemem mesi
c. millet cakes both cooked rice (Japanese loan)
b. hemem a kar wa at
c. and passive preposition made and passive preposition
b. e
c. ate
d. I planted garden produce and took it and ate it, and both millet cakes and cooked rice I made and ate.
14. a. hapo ciep ipe en-kor-e
b. hapo ciep ipe en kor e
c. mother fish ate me gave transitive verb marker
d. My mother gave me fish to eat.
15. a. ku oman wa Batchelor ipe
b. ku oman wa Batchelor ipe
c. I went and Batchelor ate
d. I went and ate at Batchelor's.
16. a. Batchelor-san orota ku monrayke
b. Batchelor san orota
c. Batchelor Japanese honorific suffix for
b. ku monrayke
c. I worked
d. I worked for Mr. Batchelor.
17. a. a-e-p a-kara ku kar wa ku iperes
b. a e p a
c. passive preposition ate thing passive preposition
b. kara ku kar wa ku iperes
c. made I made and I fed
d. I prepared the food which was served and fed them.
18. a. cikap hemem buta hemem niwatori hemem ku kar wa ku ante ne ampe opitta-no makiri-ari tuye wa ipe
b. cikap hemem buta hemem
c. bird both pork (Japanese loan) and
b. niwatori hemem ku kar wa
c. chicken (Japanese loan) and I made and
b. ku ante ne am pe opitta no
c. I placed those copula thing all adverb postposition
b. makiri ari tuye wa ipe
c. knife by means of cut and ate
d. I prepared bird and pork and chicken, and I set all those things down, and they cut them with a knife and ate.
19. a. hure sisam kosoymo patek ipe
b. hure sisam kosoymo patek ipe
c. red alien potato only ate
d. The foreigners would only eat potatoes.
20. a. Batchelor-orowa Bryant-otta ku oman
b. Batchelor orowa Bryant otta ku oman
c. Batchelor from Bryant to I went
d. I went from Batchelor to Bryant's (place).

## APPENDIX II

## KINSHIP TERMINOLOGY

The kinship terminology of the Ainu is perhaps an area which has received less competent attention than even the linguistic. I was able to collect the kinship terms of one dialect--the Horobetsu-and I present these not only as an increment to our linguistic and ethnographic knowledge of the Ainu but also in the hope that they may spur further investigation and comparison since, next to the numerical system, the area of kinship terminology is, in my belief, the most rapidly disintegrating part of the Ainu conceptual realm.

Hokkaido Ainu kinship terms: Horobetsu dialect. The transcription is phonemic and the same as the rest of the grammar. ekasi -- grandfather, great grandfather, male ancestor huci -- grandmother, great grandmother, female ancestor onaha ${ }^{1}$-- father in reference miki ${ }^{2}$-- father in address
${ }^{1}$ This term is an example of a morphophonemic change which involves the addition of $h$ before the reduplicated final syllabic vowel of a noun theme which terminates in an open syllable. As the expected base form was not volunteered, it is not listed.
${ }^{2}$ In the Hi and HS dialects; father is mici.
kokow -- son-in-law
kosmat -- daughter-in-1aw
utarihi ${ }^{1}$-- sibling in address
yupihi ${ }^{1}$-- elder brother in address
aki, akihi -- younger brother in address
kagapo -- elder sister in address
mataki -- younger sister, female sibling in address
po, poho -- son in address when a child
given name -- son in address when an adult
matne-po -- daughter in address when a child
given name -- daughter in address when an adult
ku koro nispa -- husband in address and reference
taan kur -- husband in reference
macihi $^{1}$-_ wife in reference ....
ku koro menoko -- wife in reference
given name of woman -- wife in addxess
unuhu ${ }^{1}$-- mother in reference
hapo -- mother in address and reference
aca-po -- uncle, paternal and maternal; father's sister's husband, mother's sister's husband

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unarpe -- aunt, paternal and maternal; father's brother's wife,
    mother's brother's wife
    siwto }\mp@subsup{}{}{3}\mathrm{ aca-po -- younger father-in-law
    siwto }\mp@subsup{}{}{3}\mathrm{ ekasi -- older father-in-law
    siwto }\mp@subsup{}{}{3}\mathrm{ unarpe -- younger mother-in-law
    siwto }\mp@subsup{}{}{3}\mathrm{ huci -- older mother-in-1aw
usata ir(i)wak -- parallel cousin
onahal epeka ir(i)wak ne utar -- patrilateral cross-cousin
onaha epeka apanu utar -- patrilateral cross-cousin
unuhu}\mp@subsup{}{}{1}\mathrm{ epeka ir(i)wak ne utar -- matrilateral cross-cousin
unuhu}\mp@subsup{}{}{1}\mathrm{ epeka apanu utar -- matrilateral cross-cousin
karaku -- nephew; that is, brother and/or sister's son
mat karaku -- niece; that is, brother and/or sister's daughter
ir(i)wak -- sibling (male or female); male cousin or nephew, in
        reference
mit po -- grandchild of either sex
san mit po -- great grandchild of either sex
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## BIBLIOGRAPHY

Ratçhelor, John. 1905. An Ainu-English-Japanese Dictionary. Tokyo, Japan, Methodist Publishing House. 11 pp . and 525 pp. and $159 \mathrm{pp} ., 2 \mathrm{nd}$. edition.

Garvin, Paul L. 1962. "Ponapean Morphophonemics." Phonetica, International Journal of Phonetic Research. 8.115-27.

Garvin, Paul L. 1964. On Linguistic Method. The Hague, Netherlands, Mouton and Co. 158 pp.


[^0]:    ${ }^{3}$ This is a Japanese word for father-in-1aw.

