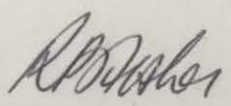


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THESIS

The Philosophy of Chuang Tzu

Submitted by

HUGH FLEMING

in fulfillment of the requirements for the Degree of  
Doctor of Philosophy

February 1978

UNIVERSITY OF SYDNEY  
FACULTY OF ARTS  
*DEPARTMENT OF ORIENTAL STUDIES*

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The Phonology of Three Japanese Dialects

Submitted by

HUGH D.B. CLARKE

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Doctor of Philosophy

February 1973.

## PREFACE

This thesis is presented in fulfilment of the requirements of the degree of Doctor of Philosophy in the Department of Oriental Studies at the University of Sydney. It is submitted as a thesis in Japanese studies and makes no claim to contribute anything new in linguistic theory. I have sought, rather, to apply the techniques of descriptive linguistics to the study of Japanese dialects in order to provide unified material for comparison.

The work is the culmination of two years study and fieldwork in Japan from April, 1967, to March, 1969, made possible by the Saionji Memorial Scholarship and a post-graduate scholarship from the University of Sydney.

I wish to express my sincere gratitude to Professor Hirayama Teruo of Tokyo Metropolitan University, who showed such kindness, patience and understanding in introducing me to the study of Japanese dialects. Thanks must also be given to Messrs. Ōshima Ichirō and Nakamoto Masachie, who taught me so much about dialect fieldwork on trips to Izu-Ōshima, the Gotō Archipelago and Kōchi Prefecture, and other members of the staff and students of Tokyo Metropolitan University who so readily accepted me into their classes. I am grateful to Mr. Inoue Fumio of the Department of Japanese Language, University of Tokyo, who was of great assistance in arranging my field trip to Tappi, and Father W. A. Grootaers who gave me much advice and encouragement.

My sincere thanks are due to my thesis supervisor Mr. B. McKillop of the University of Sydney, to Mr. John Clark, Director of the Phonetics Laboratory in the Department of English, University of Sydney, for the use of the facilities of the laboratory and to Mr. E. Atkinson for the many hours he spent teaching me how to use the pitch recorder.

I wish to thank Miss Tsuda Saeko who gave so much of her time to help with the transcription of two hours of tape-recorded material for the Sakawa dialect. Thanks must also be given to Mr. Gotō Yasuo and Miss Hamamura Motoko.

Perhaps I owe my greatest debt of gratitude to the informants without whose patient co-operation this thesis would not have been possible.

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## CHAPTER 1

### INTRODUCTION

#### 1.0. Aims and Limitations

This thesis has a double purpose. Firstly, it is an attempt to give a unified synchronic description of the sound systems of three modern Japanese dialects and, secondly, to see what light a comparison of the phonology of the dialects can cast on the diachronic study of sound change in Japanese. It is at once a synchronic and diachronic study of the three dialects concerned. It does not, however, claim to offer anything new in the field of linguistic theory. Rather it is an application of the methods of descriptive and structural linguistics to the analysis of Japanese dialects. The analysis is basically that described by Zellig S. Harris in his book *Structural Linguistics*,<sup>1</sup> but also draws heavily on procedures used by linguists like Bloch, Jorden and Martin<sup>2</sup> in their descriptions of the dialect of Tokyo. While, for the most part, the analysis is phonemic the discussion of pitch accent includes the problem of assigning lexical items to pitch contours which should more properly be included in a study of morphology.

Japanese researchers almost invariably treat segmental phonemes and the suprasegmental pitch distinctions separately, approaching the

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<sup>1</sup> Zellig S. Harris, *Structural Linguistics*, University of Chicago Press (1951), Phoenix Books, ed. 1960.

<sup>2</sup> Bernard Bloch, "Studies in Colloquial Japanese, IV, Phonemics," *Language*, 26 (1950) 86 - 125. Eleanor Harz Jorden, *The Syntax of Modern Colloquial Japanese*, 1955, (supplement to *Language* 31); Samuel E. Martin, *Morphophonemics of Standard Colloquial Japanese*, 1952 (*Language Dissertation* No.47, supplement to *Language* 28).

former from a descriptive phonemic point of view but the latter from the standpoint of morphophonemics. This inconsistency may be partially due to the importance to comparative dialectology of regional differences in the distribution of pitch contours. As Japanese dialect studies usually imply a comparison with the standard language of Tokyo, morphological concepts such as "noun", "verb", "adjective" and "particle" are taken for granted in the discussion of pitch in lexical items. Although the aim of the descriptions of each of the three dialects is to analyse the sound system, i.e. to reduce it to its phonemes, careful attention is paid to phonetic detail to ensure that the description gives an accurate idea of the auditory effect of the dialects.

In Chapters II, III and IV the dialects are analysed as closed systems out of the context of the Japanese language as a whole.

The three descriptions are completely self-contained and can be read in any order. The order, Tappi, Sakawa and Fukue, perhaps reflects the usual division of the mainland Japanese dialects into east, west and Kyūshū, but is otherwise of no relevance whatever. As the basic method of analysis is the same for each dialect, and because as dialects of a single language the dialects of Tappi, Sakawa and Fukue have many features in common, Chapters II, III and IV are very similar.

Chapter IV includes a description of the dialect of Fukue, and a comparison of the various dialects of the Gotō Archipelago.

An appendix giving a broad phonetic and the phonemic transcription of the dialect analysed follows Chapters II, III and IV. Due to the poor quality of the material tape-recorded in the Gotō Archipelago the appendix to Chapter IV is a transcription of the Nihon Hōsō Kyōkai

日本放送協会 (The Japan Broadcasting Corporation) recording

included in volume nine of *Zenkoku Hōgen Shiryō* 全国方言資料 (All-Japan dialect materials).

Chapter V is comparative, dealing with synchronic and diachronic aspects of dialect phonology.

### 1.1. Notation and Terminology

The dialects are recorded in a modified version of the International Phonetic Alphabet<sup>3</sup>. In some cases where the exact symbol was not available a similar one was used instead. The high unrounded back vowel (usually  $\omega$ ) is written with a  $u$  in Chapter 11.

[...] encloses phonetic transcription. /.../ encloses phonemic transcription. Symbols used in the description include:-

#	Pause or phrase marker
↓ → ↑	Falling, level, and rising intonation terminals
ϕ	Voiceless, bilabial fricative
β	Voiced, bilabial fricative
θ	Voiceless, interdental fricative
ð	Voiced, interdental fricative
ʃ	Voiceless, prepalatal fricative
ʒ	Voiced, prepalatal fricative
ç	Voiceless, prevelar fricative
ʂ	Voiceless, post-palatal fricative
ʐ	Voiced, post-palatal fricative
x	Voiceless, mediovelar fricative

<sup>3</sup> While the symbols are those of the International Phonetic Alphabet the terminology for the description of sounds closely follows George L. Trager, *Phonetics, Glossary and Tables* 2nd ed. Buffalo, New York, 1964.

ŋ	Mediovelar nasal
ŋ̠	Postvelar or uvular nasal
ʔ	Glottal stop or unreleased stop when combined with a consonant segment)
ɛ	Lower, mid-front vowel
ʊ	High, unrounded back vowel

The following diacritics are also used:-

̩	below	syllabic
˙	after	half long
:	after	long
̥	below	voiceless
̃	above	nasalized vowel
̠	above	centralized
̡	below	higher mid vowel
̢	below	fronted
̣	above	high pitch
̤	above	falling pitch
̦	upper left	labial nasal onset
̧	upper left	alveolar nasal onset
̨	upper left	velar nasal onset
̩	upper right	heavily aspirated
̪	upper right	weak, voiceless affrication
̫	upper right	weak, voiced affrication

The compound fricative  $\phi\zeta$  is a unit segment, as are the affricates  $t^s$ ,  $ts$ , etc. The symbols given above are used in the phonetic notation.

Additional symbols used in the phonemic notation are:-

- ˘        above            prenasalized stop
- ˘        above            end of a high pitch span
- o        Indicates a low-pitched mora or syllable
- Indicates a high-pitched mora or syllable
- ◌        Indicates a falling pitch in phonetic transcription
- △        Indicates a low-pitched particle
- ▲        Indicates a high-pitched particle.

Phonology in the title of the present study is taken to mean an analysis of the sounds of a dialect both from the descriptive and historical points of view. Phonology in its turn is divided into phonetics, the study of the auditory effect of the dialect and phonemics which is an analysis of the structural contrasts within the sound system. The phonemic description and terminology is based on Hattori, Shibata and Hirayama's<sup>4</sup> descriptions of the Japanese dialects. The terms 'peak', 'margin', 'onset' and 'coda' applied to syllable structure are borrowed from Charles F. Hockett.<sup>5</sup> Martin's description of Japanese has provided

<sup>4</sup> Hattori Shirō "On'inron kara Mita Kokugo no Akusento", 音韻論から見た国語のアフレント (A Phonemic View of the Japanese Accent), *Kokugo Kenkyū* 国語研究 (Studies in the Japanese Language) No. 2, (1954) 240-270, and "Nihongo no On'in" 日本語の音韻 (The Phonology of Japanese) in *Gengogaku no Hōhō* 言語学の方法 (Linguistic Method) Iwanami, Tokyo (1960) p.240-245. Shibata Takeshi, "On'in" 音韻 (Phonology) in *Hōgengaku Gaisetsu* 方言学概説 (An Introduction to Dialectology), Kokugogakkai ed. Musashino Shoin, Tokyo (1968) p.137-161; Hirayama Teruo *Nihongo Onchō no Kenkyū* 日本語音調の研究 (Studies on the Japanese Pitch Accent) Meiji Shoin, Tokyo (1962).

<sup>5</sup> Charles F. Hockett, *A Manual of Phonology*, Memoir 11 of the *International Journal of American Linguistics* 21 (1955) No. 4. p.74

some of the terminology for the phonemic analysis of the pitch contrasts. 'Pause group', 'tonic', 'atonic' and, by analogy, 'pretonic' are taken from his *Morphophonemics of Standard Colloquial Japanese*.

In the discussion of syllable and mora types and in the listing of environments, C is any consonant, S a non-syllabic vowel and V any vowel. V (-i) indicates any vowel other than i; C (-t,d) indicates any consonant other than t,d.

The mora obstruent phoneme /q/ is in the notation most commonly followed by Japanese investigators.

The schematic representation of phonemes in the Tappi-Sakawa-Fukue diasystem in 5.1.1., is borrowed from Uriel Weinreich.<sup>6</sup> The initials T, S and F are used in 5.1. to refer to the dialects of Tappi, Sakawa and Fukue.

## 1.2. The Dialects

The dialects chosen for phonemic analysis are:-

- 1) The Dialect of Tappi, Higashi Tsugaru-gun, Aomori Prefecture.

青森県東津軽郡竜飛

- 2) The Dialect of Sakawa-machi, Takaoka-gun, Kōchi Prefecture

高知県高岡郡佐川町

and

- 3) The Dialect of Ohana hamlet, Fukue-shi, Nagasaki Prefecture.

長崎県福江市大浜

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<sup>6</sup> Uriel Weinreich, "Is a Structural Dialectology Possible?", *Word* 10 (1954) p.388-400.



These are taken as representative of each of three main dialect divisions of the Japanese mainland.<sup>7</sup> Each differs from the Tokyo language in the number and distribution of phonemes. Tappi is a fairly typical example of the Tsugaru dialect group usually grouped with the dialect of Tokyo into the major east Japan dialect division, but it differs considerably from the Tokyo dialect in phonology, lexicon and syntax. As a remote fishing village on the extreme northern tip of the Tsugaru Peninsular it was thought that Tappi might perhaps have retained some old forms and been less influenced by the speech of Tokyo than other larger centres such as Hirosaki or Aomori.

Sakawa provides the example of a west Japan dialect. It is very similar to the dialect of Kōchi city, but probably less influenced by the dialects of Tokyo and Osaka. The dialects of Kōchi differ somewhat from other Western dialects such as those of Kyoto and Osaka in sound, lexicon and syntax.

The Fukue dialect, the major dialect of the Gotō Archipelago represents the Kyūshū dialect group. It is itself a rather divergent member with elements of the western and southern Kyūshū dialects. The dialects of the Gotō Archipelago resemble those of Kagoshima and differ from all other Japanese dialects in syllable structure and distribution of phonemes.

All three, then, differ considerably from the standard language and would be regarded as "difficult to understand" by speakers of the Tokyo dialect.

---

<sup>7</sup> This term indicates the four main islands of Japan excluding the Ryūkyū Islands.

### 1.3. The Data

The descriptions occupying chapters 11, 111 and 1V are based on material collected on short field trips made during the period 1968 to 1970. As the average time spent in each dialect area was approximately ten days, most material was elicited with prepared field questionnaires based on those made by Professor Teruo Hirayama of the Tokyo Metropolitan University. This was augmented by tape recorded natural dialogue.

Informants were interviewed in the local village office in Sakawa and Fukue and in the informants' home in Tappi. As far as possible material elicited was checked in the field and tape recordings transcribed with the aid of the informant whose voice was recorded, but in the case of some of the Tappi tapes and all of the Sakawa free dialogue, transcription was carried out in Sydney with the aid of informants from Aomori and Kōchi. Pitch meter transcriptions of the three dialects were made to facilitate the analysis of intonation, emphasis and lexical pitch contrasts. In addition to the material collected, the dialect recordings made by the Japan Broadcasting Corporation<sup>8</sup> were used for comparison. In the case of the Fukue dialect, where the field recording was of very poor quality the N.H.K. recording of the Kami-ōzu dialect of Fukue was submitted to pitch recorder analysis.

The total material collected for each of the three dialects was two thousand items from the prepared lists and approximately one hour of recorded dialogue. Where possible lexical items were elicited

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<sup>8</sup> Nihon Hōsō Kyōkai, *Zenkoku Hōgen Shiryō* . 全国方言資料  
(Japanese Dialect Material) Vol.1 - 1X.

by the suggestion method,<sup>9</sup> but translation from the standard language was also widely used. Care was taken to remind informants to give forms they would use in their own home or with members of the same dialect community. Interviews were conducted in standard Japanese.

#### 1.4. Informants

Informants were chosen from a group of people selected by the village office authorities. All were born and educated in the dialect area and used dialect in their everyday activities. Most chosen were men about sixty years old who spoke clearly<sup>10</sup> and understood the object of the research. Many informants proved unsatisfactory because of their insistence on giving standard language forms, considering that in speaking dialect they would be teaching a foreigner "bad" Japanese. Female informants were often more patient and talkative than men, but sometimes, it seems, felt awkward in front of a western, male interviewer.

Generally informants had received only the compulsory nine years' education, but in a few cases high school graduates were also used.

In the Gotō Archipelago where the dialect is spoken by all age groups younger informants were used. They were generally better able to grasp the object of the interviews and could give useful information on how they felt sounds were articulated.

#### 1.5. Dialect and Standard Language

It is probably no longer possible to find a pure dialect in Japan. In a country with virtually complete literacy and a highly developed communications network everybody to a greater or lesser extent uses

<sup>9</sup> e.g. What do you say when a man has no hair on his head? Bald!

<sup>10</sup> A lack of teeth was a problem with older informants.

the vocabulary and grammar of the standard language mixed, often unconsciously, with his own native dialect. The standard language and dialects do not occur as separate linguistic systems, as Flemish and French might in the speech of a bilingual Belgian. Rather the two occur in an overlapping continuum, so that it is often difficult, if not impossible, to identify what is original dialect and what is borrowed from the standard language. Often a borrowed term may be incorporated into the dialect sound system. In some cases, however, the loanword may retain the pronunciation it had in the standard language even where this might contravene the usual dialect phonology. In this way a loan might introduce a new distribution of phonemes or even add an extra phoneme to the sound system of a dialect.<sup>11</sup>

Yet, as far as phonology is the study of all the sounds in the speech of an informant, standard language loanwords must be included in the synchronic description of the dialect.<sup>12</sup> It is important, nevertheless, to choose informants carefully and use well-prepared questionnaires to ensure that the regional characteristics of the dialect are not lost. Where loanwords can be identified or where an unusual phoneme or phoneme combination makes one suspect dialect borrowing these words should not be used in diachronic or comparative analysis.

---

<sup>11</sup> The phoneme /v/ was introduced into the Tokyo dialect as the kana symbol *v* to account for foreign loans like /vaiorin/ *violin*. The distribution of /ʃ/ before /a/ in [ʃasson] *fashion* and /t/ before /i/ in /paati/ *party* occurs only in foreign loanwords. The tendency in the Fukue dialect to avoid a final high vowel does not generally apply to dialect borrowings or foreign loanwords, e.g. /njuugaku/ *entering school*, /biru/ *building*.

<sup>12</sup> This is Bloch's position on foreign loans in the Tokyo dialect. *Language* 26, p.86.

The term *hyōjungo* 標準語 or standard language is used by Japanese linguists to indicate the theoretical ideal for the Japanese language. Based on the speech of the Yamanote area of Tokyo<sup>13</sup> and including a few lexical items borrowed from the western Japanese dialects,<sup>14</sup> *hyōjungo* is spoken by very few, if any, Japanese. Radio announcers and the like probably come closest to the theoretical standard. Linguists prefer to speak rather of *kyōtsūgo* 共通語, the common language, which is the medium of education and communications throughout Japan. While this, too, is based on the language of Tokyo it recognises regional differences in pronunciation and pitch distribution. A dialect speaker will talk to a stranger in what he believes is standard Japanese.<sup>15</sup> His speech, however, is coloured by the sound system of his native dialect. He will retain his "namari" 訛り, his regional accent. The accuracy with which he imitates Tokyo speech will depend on how closely his dialect resembles that of Tokyo or on how much contact he has had with speakers of the Tokyo dialect. It is unusual to find speakers completely fluent in both the "standard language" and in dialect. Most people, however, would try to avoid using dialect forms when speaking to outsiders.

13: The dialect of the "down-town" area which formed the centre of Edo does not have the contrast between /si/ and /hi/ found in the modern standard language.

14: The western dialect word *kowai afraid* has replaced the eastern *okkanai id.* as standard Japanese. Tokugawa Munemasa "Hyōjungo no Seiritsu to Kamigata Kotoba" 標準語の成立と上方ことば (The formation of the standard language and the Kyoto-Osaka dialect) in *Gengo Seikatsu* 言語生活 (Language Life) 202 (July 1968)

15 "In teaching the standard language it is important to create a setting in which [the pupil] is talking to a stranger". Ushiyama Hatsuo, *Tōzai Hōgen no Kyōkai* 東西方言の境界 (The east-west dialect border) Nagano-shi, (1969) p.75.

Everybody understands the standard language.<sup>16</sup> The "standard language" (kyōtsūgo) is spoken with a variety of regional accents throughout the country, but remains the lingua franca for traversing dialect boundaries.

In prewar years the government actively strove towards the abolition of dialects as a means of strengthening national unity. Education Department policy and indeed much of the dialect study of the time was aimed at "correcting" non-standard speech. The use of the standard language was encouraged by rewarding families who used the standard language with a plaque bearing the words "Kokugo no Ie" 国語の家 (A National language house) to be nailed above the door.<sup>17</sup> This policy often resulted in creating a "dialect inferiority complex" in speakers of those dialects which differ considerably from the dialect of Tokyo.<sup>18</sup> The policy has changed somewhat since the war. Children are taught not to be ashamed of their native dialects and are encouraged to become bilingual, using the dialect in the home environment and the standard language in more formal situations.

The basic aim of the Ministry of Education still remains, however, to teach the standard language (the Tokyo dialect) to all children in Japan. The single curriculum and standardized text books used in all schools throughout the country ensures that all can read, write and

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16. Shibata Takeshi relates that in twenty years of dialect study all over Japan he only once (in 1949) met an informant (an eighty-year old woman from Hachijōjima) who could not understand standard Japanese. *Nihon no Hōgen* 日本の方言 (Japanese Dialects), Iwanami, Tokyo, 1958, p.142.

17. Hattori Shirō, "Kyōtsūgo to Hōgen" 共通語と方言 (The Standard Language and Dialect) in *Gengogaku no Hōhō*, p.734.

18. This is particularly prevalent among speakers of the northern Honshū dialects who find it very difficult to modify the central vowels [i] and [ō]. See Shibata, *Nihon no Hōgen*, chap.1V.

understand standard Japanese. The fact, however, that teachers are recruited locally means that children are generally not taught to imitate the Tokyo pronunciation. So while it is probably true to say that many items of dialect vocabulary are gradually being lost the dialects themselves are not disappearing.

A recent study by Ushiyama Hatsuo shows that the dialect borders have been virtually unaffected by the influence of the standard language. The isoglosses still follow very closely those described in the earliest maps of the dialect surveys of the Kokugo Chōsa Iinkai

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(The National Language Investigation

Committee) made in 1903 and Tōjō Misao's maps of 1908.<sup>19</sup>

It is a measure of the tenacity of dialects that fifty years of universal education in the standard language has resulted in very little change in dialect distribution.

Ushiyama's study of the use of standard language in Nagano<sup>20</sup> revealed that a combination of factors - 1. Sex, 2. Age, 3. Education, 4. Occupation and occupation of parents, 5. Standard language training, 6. Language consciousness - governs the use of standard language. Surprisingly, frequency of movement outside the dialect area was of only minor significance and the influence of

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<sup>19</sup> Ushiyama's study is concerned with grammatical features. The position of the - n/ - nai negative suffix isogloss corresponds closely with the early maps though the overlap is greater. The distribution map for young speakers is basically the same as that of older informants, but again the degree of overlap (area of use of both - n and - nai) is larger. The border of the d̤a (ja)/da distinction of the copula and the ko:ta/katta 'bought' border has been apparently unaffected by the standard language. Ushiyama Hatsuo "Gohōjō yori mitaru tōzai hōgen no kyōkaisen ni tsuite"

語法上より見たる東西方言の境界線について

(On the east/west dialect border seen from the point of view of grammar) in *Tōzai Hōgen no Kyōkai*, p. 4 - 9.

<sup>20</sup> "Nagano-ken Suwa chihō hōgen no Kyōtsūzōka ni tsuite"

長野県諏訪地方方言の共通語化について

(On the change to standard language in the dialects of the Suwa area of Nagano Prefecture) in *Tōzai Hōgen no Kyōkai*.

newspapers and radio seemed to have no bearing on the use of the standard language in the area under investigation. The study showed that statistically the standard language is most used by female students or professional people between the ages of fifteen and twenty-nine, with a high-school education and parents engaged in a profession; those who have been educated in the use of the standard language and make a conscious effort to avoid using dialect forms in their speech. Dialect is most used by males over fifty who are themselves engaged in agriculture and come from agricultural families; those who have had no more than a middle-school education, who have had no instruction in the use of the standard language and do not try to avoid dialect in their speech. This latter group provides the best informants for comparative dialect research.

When two languages come into contact it is usual for the politically inferior (dialect) to be influenced by the politically superior (standard language). The change occurs first in lexicon then in syntax and finally in phonology. In the Japanese dialects the pitch distribution is least liable to change.<sup>21</sup>

In the present thesis no attempt has been made in the descriptions in Chapters II, III and IV to distinguish loanwords from original dialect. All forms given, (unless obviously mistakes or slips of the tongue) both in response to the prepared questionnaires or in tape-recorded dialogues, are treated as dialect. In the comparison of the dialects in Chapter V, however, where two synonymous terms are given, one of which is identical to the Tokyo dialect form, the other is taken to be the original dialect word.

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<sup>21</sup> *Ibid.* p.76.



## 1.6. Japanese Dialect Study

Japanese have long been keenly aware of regional differences in their language. The Manyōshū devotes one of its twenty-six volumes<sup>22</sup> to *Azuma-uta* 東歌 (Poems of the eastern provinces) and a further ninety-three poems in volume twenty, the *sakamori no uta* 防人歌 (poems of the border guards) are written in a dialect clearly different from that of the capital. The fact that the dialect poems were included in the anthology perhaps indicates that nobles of the Nara period felt a degree of affection for the northern dialects and appreciated the simple rustic charm and melancholy they evoke.<sup>23</sup> If this were so it certainly was not true of the Heian period. With the increased refinement of life at the capital dialects, particularly those of the *Azuma* area, were despised as the loathsome marks of an uncouth rural upbringing. Except for a few disparaging references in the *Genji Monogatari* and other contemporary literary works<sup>24</sup> dialect was virtually ignored. In the Muromachi period scholars began to notice that old words often remained in regional speech. The first significant attempt at a linguistic description of Japanese dialects occurs in the *Arte de Lingoa de Iapan*

<sup>22</sup> The two hundred and thirty poems are collected in volume fourteen.

<sup>23</sup> There is some doubt as to whether the poems are faithful examples of the eastern dialect. They may have been written by poets in Nara who merely added dialect words. The *sakamori no uta* were often prefaced by remarks indicating they were not considered works of literary merit. Tsukahara Tsuneo "Hōgen no Rekishi" 方言の歴史 (History of the dialects) in *Hōgengaku Kōza* 方言学講座 (A Course in Dialectology) 1, 168.

<sup>24</sup> Tsukahara quotes examples from *Genji Monogatari* 源氏物語 *Shūishū* 拾遺集 (Collection of Gleanings), *Konjaku Monogatari* 今昔物語 (Tales of Old) and the *Kinyōshū* 金葉集 (The Collection of Golden Leaves), *Hōgengaku Kōza*, 1, 169-170.

written by the Portuguese missionary João Rodriguez in 1604.<sup>25</sup>

The attitude towards dialects changed somewhat during the Edo period. The growth of regional consciousness which had given rise to the writing of local histories, *fudoki*, in the Muromachi period was fostered by the Tokugawa shogunate as a means of promoting public order and government stability in the feudal system. Compilations of dialect words were made to emphasize the diversity and closed nature of the rural fiefs. The *hōgenshū* 方言集 (collections of dialect words) were edited in such a way (by choice of the words included and the explanations given) as to show the connection between a particular dialect and the central language. No attempt was made to show the inter-relatedness of the dialects or to classify dialects into larger groupings. This reflects the government policy of discouraging regional solidarity by minimizing contacts among the fiefs and substituting direct allegiance to the central authority.<sup>26</sup> Despite the new role dialects could play in reinforcing the feudal system they continued to be objects of scorn and contempt to anyone fortunate enough to speak the language of the capital. Scholars and poets, however, began to study dialect as a guide to the interpretation of the classics or to provide new vocabulary for the writing of *haikai*. In 1650 Yasuhara no Sadamuro 安原貞室 wrote *Katakoto* 方言 (Babble) a text book of standard Japanese comparing dialect words and pronunciation with the "correct speech" of Kyoto.<sup>27</sup>

25 Rodriguez deals with features of pronunciation and syntax of the *Azuma*, *Chūgoku* (Okayama, Hiroshima, Yamaguchi, Shimane, Tottori prefectures) and *Kyūshū* dialects as well as the language of Kyōto. The Japanese-Portuguese dictionary *Vocabulario de Lingoa de Japam* published by the Portuguese missionary press in 1603 listed four thousand dialect words in its 32,800 entries. *Hōgengaku Kōza* 1, 172.

26 *Ibid.* p.173.

27 *Kokugogaku Jiten* 国語学辞典 (Dictionary of Japanese Language Study) p.157. The title refers to the book's aim to correct childish babble.

The haikai poet Koshigaya Gozan 越谷吾山 compiled the first collection of dialect words *Shokoku Hōgen Butsurui Shōko* 諸国方言物類杯呼 (The Names of Things in the Dialects of the Provinces) in 1775.

Another dialect dictionary, the twenty-six volume *Rigen Shūran*

*俚言集覽* (A Compilation of Dialect Words) is attributed to the scholar Ōta Zensai 太田全斎 (1759-1829).<sup>28</sup> *Sendai Kotoba* 仙台言葉 (The Sendai Dialect) (1720), *Owari Hōgen* 尾張方言 (The Owari dialect) (1749), *Hamaogi* 浜荻 (The 'reed')<sup>29</sup> (1767), *Okuni Tsūji* 御国通辞 (The Provincial Interpreter) (1792), *Hata Hōgen* 幡多方言 (The Hata Dialect) (1817) and *Naniwa Kikigaki* 浪花聞書 (The Naniwa [Osaka] Dictionary) (1819) are examples of ten or more dialect vocabularies which have survived from the Edo period.

In addition to the collections of dialect words there was extensive use of dialect in literature. Collections of comic anecdotes, haikai, jōruri ballads and kabuki librettos written in dialects other than those of Kyōto or Edo appeared to meet the demands of the townsman class in provincial cities.<sup>30</sup> Apart from this true dialect literature many Edo authors like Jippensha Ikku 一返舎一九 and Shikitei Sanba 式亭三馬 would evoke local atmosphere by making their characters speak in dialect.

<sup>28</sup> *Kokugogaku Jiten*, p. 945.

<sup>29</sup> The title of this work on the Shōnai dialect is a reference to the proverb *Naniwa no ashi wa Ise no hamaogi* 難波のあし伊勢の浜荻 (An 'ashi' (reed) in Naniwa [Osaka] is a 'hamaogi' (reed) in Ise) indicating that different places use different words. Tōjō Misao, "Hōgenkenkyū Shōshi," *方言研究小史* (A Short History of Dialect Study) in *Hōgengaku Gaisetsu* 方言学概説 (An Introduction to Dialectology), Musashino Shoin, 1962, p. 4.

<sup>30</sup> See *Kokugogaku jiten*, p. 945.

It was the introduction to Japan during the nineteenth century of classical European philology which placed Japanese linguistics on a firm scientific footing. The influence of English dialectology such as the work of Sweet was the first to be felt in Japan. English and Americans living in Japan undertook work on Japanese dialects, often publishing their findings in the pages of the journal of the Asia Society of Japan. One such study was that made by Dallas on the dialect of Yonezawa in 1875. Chamberlain's important paper "Essay in Aid of a Grammar and Dictionary of the Luchuan Language" appeared in 1895.

The German dialectologist Wenker whose early work in dialect geography, *Das Rheinische Platt* appeared in 1876 and Paul who completed his survey of all the German dialects in 1879 were later to influence the work of Ueda Kazutoshi 上田万年, the founder of modern Japanese dialectology. After reading philology under Chamberlain at Tokyo University, Ueda studied in Germany from 1890 to 1893. He returned in 1894 to teach at his old university and soon began urging the Ministry of Education to undertake a dialect survey as a step in revising the kana spelling and establishing standard pronunciation. Finally in 1902 the *Kokugo Chōsa Iinkai* 国語調査委員会 (National Language Investigation Committee) was set up within the Ministry of Education and in 1904 questionnaires on twenty-nine points of pronunciation were sent out to city and prefectural offices, teachers' colleges and other educational establishments covering the seventy-odd old *kuni* divisions all over Japan.

The reports were collated and published along with twenty-nine distribution maps in 1905 under the title *On'in Chōsa Hōkokusho* 音韻調査報告書 (Report on the Phonological Survey).<sup>31</sup> The validity of the results is open to question as very few of the investigators had any phonetic training, there was no standardization of transcription and many of the reports were incomplete.<sup>32</sup> Nevertheless the report and particularly the maps represent a milestone in Japanese dialect study as the first attempt at a comprehensive survey of all the Japanese dialects. The phonological distribution maps together with the thirty-eight maps which accompanied the *Kōgohō Chōsa Hōkokusho* 口語法調査報告書 (A Report on the Investigation into Colloquial Grammar) published in 1906 became the basis for the classification of the Japanese dialects. In 1908 Ueda, Shinmura Izuru 新村出 (a Tokyo university graduate who had studied in England, France and Germany and introduced the works of the Swiss dialectologist Gilliéron into Japan) and other members of the *Kokugo Chōsa Iinkai* completed a far more ambitious survey of the Japanese dialects with a questionnaire of forty-one phrases and sentences and ninety questions on grammar, covering the eight hundred cities and *gun* (counties) in Japan and the Ryūkyū islands.

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31. Tōjō Misao *Hōgengoku Gaisetsu* p.10.

32. Tōjō Sensei Kōki Kinenkai 東条操先生古稀記念会 (Committee for the Commemoration of Prof. Tōjō Misao's Seventieth Birthday) ed. *Nihon Hōgen Chizu* 日本方言地図 (A dialect Atlas of Japan) p.6, (explanation).

In 1910 Tōjō Misao, later to become the most important person in Japanese dialect study, graduated from Tokyo University where he had been studying under Ueda Kazutoshi and took charge of the National Language Investigation Committee. In the meantime some criticism that the dialect surveys were too distant from the original object of establishing a standard language had so weakened the standing of the *Kokugo Chōsa Iinkai* that in June 1913 the Committee went out of existence, the victim of an administrative cut-back. The field material and reports published by the Committee were later completely destroyed in the Kantō earthquake of 1923. The promising start Japanese dialectology showed during the Meiji period was followed by a period of virtual inactivity during the Taishō years (1912 - 1926). In 1916 the Ministry of Education set up a National Language Investigation Institute (Kokugo Chōsa-Shitsu 国語調査室). Tōjō Misao working here ordering dialect field material had completed 200 distribution maps for phonology by 1918 and in 1921 had 350 grammatical distribution maps ready to be published. Unfortunately, the material which he was unable to publish due to lack of funds was destroyed, together with all the field notes, in the earthquake of 1923.<sup>33</sup>

Tōjō had learned enough from sorting through the results of the *Kokugo Chōsa Iinkai* from 1910 to 1921 to publish his *Kokugo Hōgen Kukaku* 国語方言区画 (The Japanese Dialect Divisions) in 1927. The dialect distribution map included in the work was a condensation in one map of the material collected by the *Kokugo Chōsa Iinkai*.

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33 *Hōgengaku Gaisetsu*, p.13.

The early Shōwa period saw the beginning of great activity in the study of the Japanese pitch accent system. The Russian linguist Polivanov who came to Japan in the summer of 1914 spent two years studying the accents of not only the standard Tokyo dialect but also of Aomori, Akita, Kyoto, Kōchi and Nagasaki. His work published later in Petrograd exercised little direct influence on the work of Japanese researchers. It did, however, provide the impetus for the investigation of the pitch accent system which was the main emphasis in Japanese dialect study until recently.

An important contribution to dialect research in the Shōwa period was made by the linguist-ethnologist Iha Fuyū 伊波普猷 whose work *Gengo Minzoku* 言語民俗 (Language Customs) along with Miyanaga Masamori 宮良当壮's research on the vocabulary of the Ryūkū dialects was the first real scientific study of Ryūkyūan since Chamberlain. The dialects of the Ryūkyū Archipelago began to attract the interest of Japanese scholars. In 1923 Tōjō Misao produced his *Nantō Hōgen Shiryō* 南島方言資料 (Source Materials for the Dialects of the Southern Islands). Polivanov wrote a paper on the vowels of Japano-Ryūkyūan. The ethnologist Yanagida Kunio 柳田 國男 made an impact on Japanese dialectology with his work *Kagyū-kō* (Thoughts on Dialect Forms of "snail"), which first appeared in the *Jinrui Zasshi* 人類雜誌 (Anthropology Magazine) in 1927. Yanagida went beyond the classifications of dialects and for the first time tried to explain the historical implications of the distribution of dialect forms. He

noticed that the different dialect words for 'snail' seemed to be distributed in a series of concentric circles. This he explained in the *shūkenron* 周 圈 論 (wave theory) which postulates that a new form generated at the cultural centre gradually replaces the old form, forcing it outwards like the ripples caused by a stone thrown into a pond. The further a form is from the centre the older it is.

Yanagida Kunio joined Tōjō Misao as the driving force behind Japanese dialect study. *Hōgen Kenkyūkai* 方言研究会 (Dialect Societies) grew up first in Tokyo and then all over Japan. In 1931 a specialist periodical *Hōgen* was published. A great deal of the activity of this period was the work of enthusiastic amateurs intent on collecting only unusual dialect words. Often a study of dialect phonology would indicate only the points of difference between the dialect and the standard Japanese. No systematic study of an entire dialect was made. Virtually all dialect was recorded in the kana syllabary which often gave only an approximation of dialect phonology.

In the period since the war the position has improved considerably. The establishment of the *Kokuritsu Kokugo Kenkyūsho* 国立国語研究所 (The National Language Research Institute) in 1948 marked the beginning of a new period in dialect research. The emphasis changed from the classification of the Japanese dialects to dialect geography. The production of the *Nihon Genyo Chizu* 日本言語地図 (Linguistic Atlas of Japan - LAJ) covering some two hundred items and 2,400 locations all over Japan is the Institute's main contribution to dialect studies. The first volume of fifty maps showing the distribution of certain features of phonology and adjectives and volume two devoted to verbs were published in 1967. To



date three of the proposed six volumes have been published.

Another feature of post-war dialect studies in Japan is the new scientific rigour that has been introduced into the study by linguists such as Hattori Shīrō and Shibata Takeshi trained in general linguistics.<sup>34</sup> Most of the younger dialectologists are familiar with the latest trends in American and European linguistics and are competent phoneticians quite at home with phonetic script.

### 1.7. The Japanese Dialects

The division of the Japanese dialects has long provided debate between the descriptive dialectologists and dialect geographers. The dialectologists of the Tōjō Misao school argue that it should be possible to define dialect divisions based on an overall study of phonology, grammar and lexicon,<sup>35</sup> to explain the dialect consciousness of the speakers of Japanese.<sup>36</sup> The dialect geographers, on the other hand, claim it is impossible to map the distribution of anything as complex as the "whole dialect system" as the isoglosses for different linguistic features rarely correspond exactly. The *kukaku* 区画 (division) of the Japanese dialects

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<sup>34</sup> Japanese linguists tend to fall into three separate and usually mutually exclusive groups, kokugogaku 国語学 (Japanese Language study); gaikokugo 外国語 (Foreign language study) for students of the major European language and gengogaku 言語学 (Linguistics) for theoretical linguistics and study of the minor languages. See W. A. Grootaers, "Dialectology" *Current trends in Linguistics, 2 Linguistics in East Asia and South East Asia*, Mouton, London. 1966.

<sup>35</sup> Tōjō Misao, "Hōgen no Kenkyū" 方言の研究 (Dialect Study) in *Hōgengaku Kōza* 1, 9.

<sup>36</sup> A study of the dialects of the Itoigawa area by Shibata Takeshi indicated that dialect consciousness does not necessarily correspond to linguistic reality. Cultural, political and other non-linguistic factors are more important in forging group consciousness. See *Nihon no Hōgen Kukaku* 日本の方言区画 (The Japanese Dialect Divisions) p. 38

for them represents no more than an abstraction, an average of dialect features which, at best, gives only an approximation of dialect divisions. In order to plot geographical distribution on a map, dialect geographers insist, lexical items or features of phonology or grammar must be treated one at a time.

It is, nevertheless, useful in the study of Japanese dialects to divide the Japanese language into a few primary and a number of secondary dialect divisions even if the position of the border cannot be ascertained exactly.

Most studies on the classification and distribution of the Japanese dialects are based on the material collected in the correspondence surveys of the *Kokugo Chōsa Iinkai* made in 1904. For this reason they rely largely on phonology and grammar. Tōjō Misao included a few items of dialect vocabulary in drawing up his original dialect classification, but maintained that the distribution of single lexical items is of little value in ascertaining dialect divisions. Tōjō, on the basis of his premise that the entire dialect system should be taken into account, was able to divide Japanese into two major divisions; the dialects of the Ryūkyū Archipelago and those of the rest of Japan (hereafter referred to as the mainland). The mainland dialects he further divided into Kyūshū and Honshū dialect groups. The early correspondence surveys had shown an east/west division of Honshū around a remarkable bunching of isoglosses running through the Chūbu<sup>37</sup> area. A comparison of the isoglosses, however, reveals that there is considerable variation in distribution from one item to the next. While areas to the east of Chūbu are obviously different from areas to the west, the point of the dividing line is far from clear.

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<sup>37</sup> The nine prefectures of Niigata, Toyama, Ishikawa, Fukui (the Hokuriku prefectures), Nagano, Yamanashi, Gifu, Aichi and Shizuoka (the Tōkai-Tōsan area).

Tōjō's original dialect map<sup>38</sup> showed the Chūbu area as a separate dialect belt between the eastern and western groups, dividing Honshū into three major dialect groups. Later the Chūbu dialect group was eliminated by reassigning the dialects of the area. The Hokuriku dialects (Fukui, Ishikawa and Toyama) were included in the west-Japan dialect group and the Tōkai-Tōsan dialects (the southern half of Niigata, Nagano, Gifu, Aichi, Shizuoka and Yamanashi) into the east-Japan dialects.

The difficulty in classifying the Chūbu dialects arises from Tōjō's insistence on making the entire dialect 'system' the point of comparison. The pitch accent and general phonology of the Chūbu dialects closely follows the pattern of the east-Japan dialects while grammatically the area resembles the western dialects. Even within the Tōjō school of thought differences in interpretation occur according to whether phonological or grammatical criteria are given most weight in evaluating the dialect 'system'. Tsuzuku Tsuneco and Kindaichi Haruhiko differ from Tōjō in including Aichi and Gifu prefectures with the west Japan dialects.<sup>39</sup> Ushiyama Hatsuo, in a detailed study of the Chūbu area, agrees that if grammatical isoglosses are to be emphasised the dialects of Gifu and Aichi should be included with the dialects of west Japan, but defends Tōjō's division on the grounds that it is based on an overall study of phonology, grammar and lexicon.<sup>40</sup>

38 The *Dai-Nihon Hōgen Chizu* 大日本方言地図 published in 1927 as a supplement to *Kokugo no Hōgen Kukaku* 国語の方言区画 (The Dialect Divisions of Japanese). *Hōgenyaku Kōza*, 1, 8.

39 Tsuzuku grouped Aichi and Gifu together in the Gifu dialect as a subdivision of the west Honshū dialects and Nagano, Yamanashi and Shizuoka into the Nayashi subdivision of the eastern Honshū dialects. Ushiyama Hatsuo, "Chūbu Nihon ni Okeru Kinki Hōgen no Bunpu"

中部日本における近畿方言の分布 (The Distribution of the Kinki Dialect in Central Japan) in *Tōzai Hōgen no Kyōkai*, p. 97.

40 Ushiyama, *op.cit.* p.98.

Tōjō's three way division of the Ryūkyū dialects into Amami, Okinawa and the southern islands was perhaps somewhat influenced by geographical and political factors. Tōjō's classification in general is open to the criticism that it is influenced by existing geographical and political divisions. To draw the Kyūshū-Honshū, border through the straits at Shimonoseki conceals the fact that the dialects of Fukuoka and Ōita are in many respects closer to the Chūgoku dialects than they are to the rest of Kyūshū.

In the same way, it may be claimed, the fact that Ibaraki is geographically part of the Kantō leads Tōjō to include the dialect of the area in the Kantō dialect subdivision despite its similarities to the southern Tōhoku dialects.

Professor Hirayama Teruo's dialect classification closely resembles that of Tōjō. Hirayama incorporates the dialect of Hachijōjima (which had not been considered in Tōjō's classification) as a fourth major division of the mainland dialects and differs from Tōjō in his classification of the dialects of the Ryūkyūs, which he divides into two primary and five secondary divisions.<sup>41</sup>

The dialect of Hachijōjima contrasts with all other Japanese dialects in having a separate attributive inflection of the verb.<sup>42</sup> The division of the Ryūkyū dialects is based mainly on general features of accent, phonology and lexicon, but cannot be clearly shown by means of isoglosses.

The difficulty of communication over the widely scattered islands of the archipelago has given rise to a situation where almost every island

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41. Hirayama Teruo, *Ryūkyū Hōgen no Sōgōtcki Kenkyū* 琉球方言の総合的研究 (A Comprehensive Study of the Ryūkyū Dialects). Meiji Shoin, Tokyo, 1966, p.9.

42. Yomo hon *the book* [I] read compared with yomu hon in other dialects.  
 Hirayama Teruo, *Nihon no Hōgen* 日本の方言 (Japanese Dialects)  
 Kōdansha, Tokyo, 1968, p. 118.

has its own dialect. It is difficult to find features shared by all Ryūkyū dialects which distinguish them as a group from the dialects of the mainland. It is even more difficult to define the linguistic characteristics of the subdivisions within the dialect group. Where the degree of overlap and variation is so great as to virtually exclude a structural division as proposed by Tōjō, the drawing up of divisions based on mutual intelligibility may provide an alternative method.<sup>43</sup> The classification of the Japanese dialects as proposed by Hirayama is summarized in chart one. Map one shows the approximate distribution of the dialects.

#### 1.7.1. Dialect Divisions based on Phonology

Here it is proposed to examine the distribution of a number of phonological features and the classification of the Japanese dialects from the point of view of their pronunciation in order to situate the dialects analysed in Chapters II, III and IV in their correct phonological environment. For comparative purposes, too, a distribution based on systematic features of phonology will be more useful than a classification based on an arbitrary evaluation of miscellaneous linguistic criteria.

If the Japanese dialects are grouped on the basis of phonology the divisions differ from those proposed by Tōjō.

Kindaichi Haruhiko in his division of Japanese dialects based on phonology first separates the Ryūkyū and mainland dialects.<sup>44</sup> The mainland dialects are further divided into three groups designated by him as the *Ura Nihon* (Japan Sea) dialects; the *Omote Nihon* (Pacific)

<sup>43</sup> Robert Cheng of the East-West Centre, University of Hawaii, in a paper delivered to the 28th International Congress of Orientalists in Canberra, Australia, in 1970, proposed a classification of the Chinese dialects on the basis of how long it takes a speaker of Mandarin to learn a particular dialect.

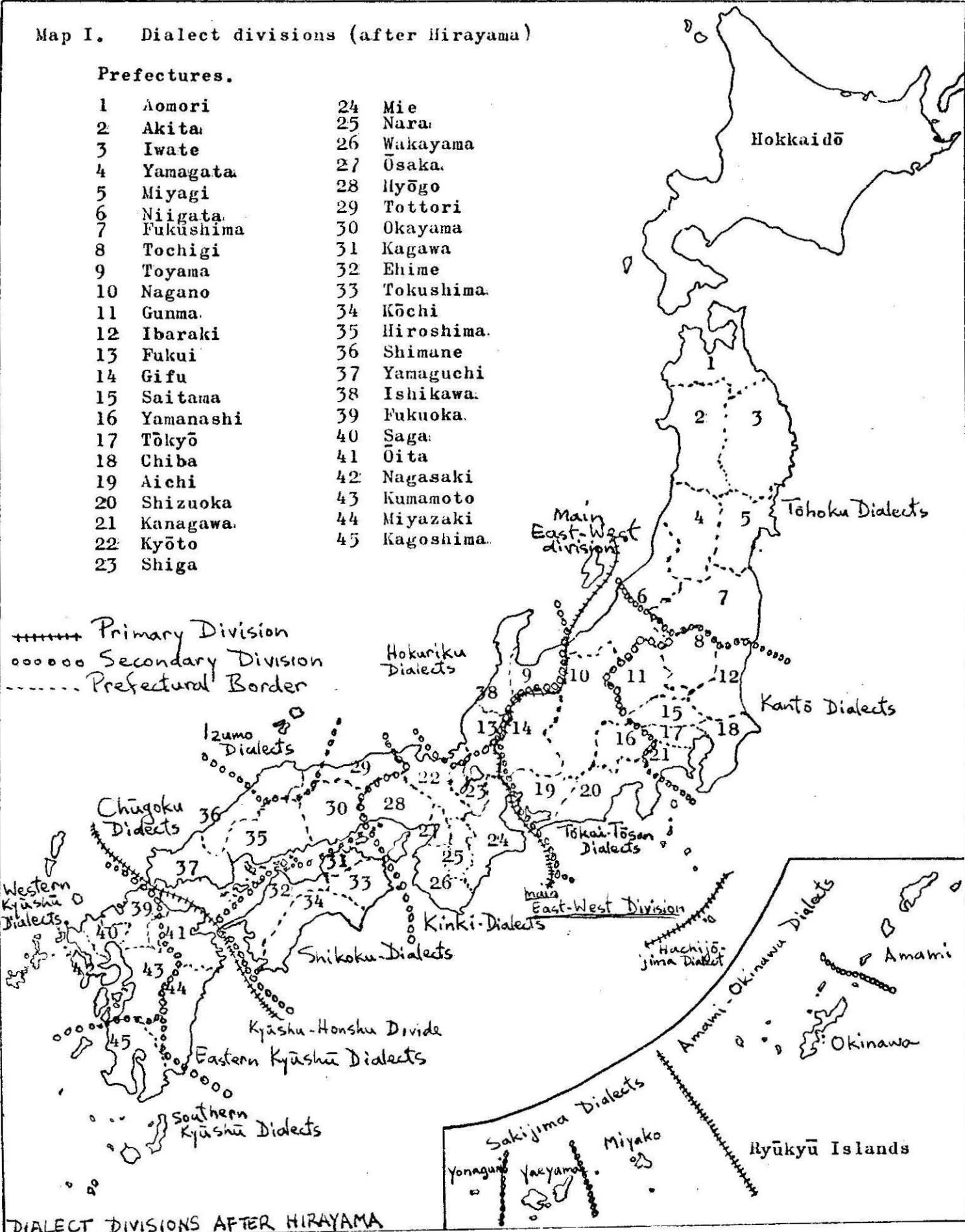
<sup>44</sup> Umezaki Minoru, "On'in" 音韻 (Phonology) in *Hōgengaku Kōza*, I, 53.

NO PAGE 28.

Map I. Dialect divisions (after Hirayama)

Prefectures.

- |              |               |
|--------------|---------------|
| 1 Aomori     | 24 Mie        |
| 2 Akita      | 25 Nara       |
| 3 Iwate      | 26 Wakayama   |
| 4 Yamagata   | 27 Ōsaka.     |
| 5 Miyagi     | 28 Hyōgo      |
| 6 Niigata    | 29 Tottori    |
| 7 Fukushima  | 30 Okayama    |
| 8 Tochigi    | 31 Kagawa     |
| 9 Toyama     | 32 Ehime      |
| 10 Nagano    | 33 Tokushima. |
| 11 Gunma.    | 34 Kōchi      |
| 12 Ibaraki   | 35 Hiroshima. |
| 13 Fukui     | 36 Shimane    |
| 14 Gifu      | 37 Yamaguchi  |
| 15 Saitama   | 38 Ishikawa.  |
| 16 Yamanashi | 39 Fukuoka.   |
| 17 Tōkyō     | 40 Saga       |
| 18 Chiba     | 41 Ōita       |
| 19 Aichi     | 42 Nagasaki   |
| 20 Shizuoka  | 43 Kumamoto   |
| 21 Kanagawa. | 44 Miyazaki   |
| 22 Kyōto     | 45 Kagoshima. |
| 23 Shiga     |               |



DIALECT DIVISIONS AFTER HIRAYAMA

dialects and the *Satsugū* (Kagoshima) dialects.

The *Ura Nihon* dialects comprise the six prefectures of the Tōhoku region (Aomori, Iwate, Akita, Yamagata, Miyagi and Fukushima) most of Ibaraki and Tochigi prefectures and the Izumo area of Shimane prefecture. Lying somewhere between the *Ura* and *Omote Nihon* dialects are:-

Kashima-gun in southern Ibaraki; most of Chiba prefecture; the four eastern counties of Saitama prefecture; the Aso 安蘇 area of Tochigi and the Ōra 邑樂 area of Gunma prefecture. The three northern counties of Niigata may be included into the *Ura Nihon* dialect area. The Nōto Peninsula of Ishikawa; Toyama prefecture; the north-eastern corner of Nagano and the southern half of Niigata prefecture and Sado Island bear traces of both the Japan Sea and the Pacific coast dialects. The Pacific coast dialects seem to have eroded into the territory of the Japan Sea dialects in western Niigata; all of Fukui: the Kaga district of Ishikawa and in the Oki and Hōki areas of Tottori.

The *Omote Nihon* dialects occupy the remainder of the islands of Honshū and Shikoku and Kyūshū except for the southern tip of that island.

The Kagoshima dialect occurs in Kagoshima prefecture and Morokata county of Miyazaki prefecture.

The Kagoshima dialect shares certain features with the Japan Sea dialects. Both may be considered peripheral dialects which have undergone sound changes and moved away from the "standard" language of the cultural and political centre of the Pacific dialect region.

Many of the earlier dialect classifications based as they are on the old and sometimes suspect material provided by the *Kokugo Chōsa Inkai* may no longer give an accurate picture of the Japanese dialects.



The Linguistic Atlas of Japan 日本言語地図 (LAJ)<sup>45</sup>.

will eventually provide a more accurate account of dialect boundaries.

Here it is proposed to group the Japanese dialects on the basis of phonology by examining the isoglosses for phonological features in Vol. 1 of LAJ (maps 1, 3, 4, 5, 7 and 14) and Professor Hirayama's pitch accent distribution map.<sup>46</sup>

The phonological features examined were:-

- Map 1. The pronunciation of /g/ in /kagami/ *mirror*
- Map 3. The pronunciation of /k/ in /kazi/ *fire*
- Map 4. The pronunciation of /k/ in /suika/ *watermelon*
- Map 5. The pronunciation of /g/ in /ganzitu/ *New Year's day*
- Map 7. The pronunciation of /se/ in /senaka/ *back*
- Map 14. The pronunciation of /si/ in /sitigatu/ *July*

The distribution of pitch accent types as shown in Hirayama Teruo's Pitch Distribution Map in *Nihongo Onchō no Kenkyū*, (A Study of the Japanese Pitch Accent), Tokyo, 1957.

The composite map of the phonological features examined divides the Japanese dialects into about fifty areas. This number may be reduced to about eight if areas traversed by only one phonological isogloss are included into a single dialect.

As can be seen from Map 2 (insert back cover), of the seven phonological features examined, only the isoglosses for [kw] for /k/ in /kazi/ and [gw] for /g/ in /ganzitu/ (maps 3 and 5) correspond exactly. There is, however, a significant bunching of isoglosses in:-

- (1) the Izumo area comprising the northern half of Shimane and the

<sup>45</sup> Kokuritsu Kokugo Kenkyūsho 国立国語研究所  
(The National Language Research Institute), *Nihon Gengo-Chizu* 日本言語地図  
(The Linguistic Atlas of Japan), Okura-shō Shuppan-Kyoku, Tokyo, 1967,  
Vol. 1.

<sup>46</sup> Japanese dialect pitch distribution map included in *Zenkoku Akusento Jiten* 全国アクセント辞典 (All Japan Accent Dictionary), Tōkyōdō, Tokyo, 1960.

south-west corner of Tottori prefecture; (2) along the eastern border of Fukui, the western and southern borders of Ishikawa, the southern border of Toyama and along the border of Niigata to the Japan Sea coast; (3) along the Fukuoka-Oita border and cutting half way through Saga; (4) the northern quarter of Yamagata; (5) along the borders of Tokushima and (6) along the borders of Kōchi.

The number of divisions would, no doubt, increase with the number of isoglosses examined, but it seems reasonable to assume that the ultimate web of dialect divisions will be less complex when based on systematic phonological features than it would be if based on lexical items.

It is possible to compare the phonology of the dialects by measuring statistically how far they differ from the standard language. By setting the phonology of the standard language at 0 and allotting points according to the degree by which a feature of dialect pronunciation differs from the standard it is possible to arrange the Japanese dialects in order of phonological proximity to the standard language. This does not mean that dialects with the same score are necessarily related, it is interesting, however, that the distribution of dialects given by this method largely corresponds to Kindaichi's dialect distribution map based on the classification of dialect phonology.

Points were allotted according to the following table:-

Map 1.	/g/ in /kagami/	η = 0	g = 1	ng = 2
Map 2.	/k/ in /kazi/	k = 0		kw = 2
Map 3.	/k/ in /suika/	-k = 0		-kw = 2
Map 4.	/g/ in /ganzitu/	k = 0	g = 1	gw = 2
Map 7.	/se/ in /senaka/	se = 0		se, θe, ce = 2
Map 14.	/si/ in /sitigatu/	si = 0	s + ç = 1	ç = 2, sī = 2 sī/sǖ = 3
Pitch-accent types	- Tōkyō accent = 0, Kyōto accent = 1, Kita Ōu = 2			
	Accentless = 2			
	Kyūshū accent = 2			

The scores for the main dialect divisions based on the LAJ  
and Hirayama maps are:-

Hokkaidō (except south-west) and isolated islands	2
South-west tail of Hokkaidō	5
Aomori, Akita, top corner Yamagata	13
S.E. Aomori, western half Iwate, small wedge in Yamagata	11
E.1/2 Iwate, N.1/2 Miyagi, Central Yamagata	7
S.E. Yamagata, S. 1/2 Miyagi (accent change)	7
Northern Fukushima	5
Fukushima, Ibaraki	2
Tochigi	3
S.W. corner of Tochigi	4
Gunma, Saitama	2
Chiba (except 1/5 along northern border )	1
Northern border of Chiba	0
Nagano, Shizuoka, Yamanashi, Kanagawa, Tokyo	1
S.W. tip of Shizuoka	2
Aichi	3
Gifu	2
Mie	4
Shiga	3
Kyōto (except N. coast), N.1/2 Osaka, E.tip Hyōgō	
E.1/2 Nara	2

S. 1/2 Osaka W. 1/2 Nara, Wakayama	4
S. 1/2 Hyōgō Awaji	3
Tokushima	9
E. Kōchi	5
W. Kōchi	6
Kagawa	8
Ehime, except for no-accent strip	4
Ehime, no-accent strip	5
Japan-Sea Coast Kyōto	1
Japan-Sea Coast Hyōgō	3
S.E. Tottori, E. Okayama	3
W. Okayama, N.E. Hiroshima	5
Northern coastal strip of Shimane	11
Behind coastal strip of Shimane	12
Rest of Shimane coast	1
Tottori W. Coastal strip	12
E. 1/2 Tottori coast	7
Rest of Tottori coast	5
E. 1/2 inland Tottori	3
Rest of Inland Tottori	3
Hiroshima and Yamaguchi	3
N.E. Fukuoka	3
W. Fukuoka and Saga	5
Ōita & Southern tip of Fukuoka	8
Miyazaki	13
Kumamoto	12
Kagoshima	12

Nagasaki	13
Northern border strip Niigata	8
Coastal strip down to accent border Niigata	9
Middle section of Niigata	7
To Niigata/Toyama border	6
Toyama	9
Ishikawa	11
Fukui	3

The areas with over ten points are:-




1. An area in northern-Japan comprising all of Aomori and Akita prefectures, the western half of Iwate prefecture and a small wedge in Yamagata;
2. The northern half of Shimane prefecture and a small area of southern Tottori;
3. Ishikawa prefecture.
4. Kyūshū excluding Ōita, Fukuoka and half of Saga.

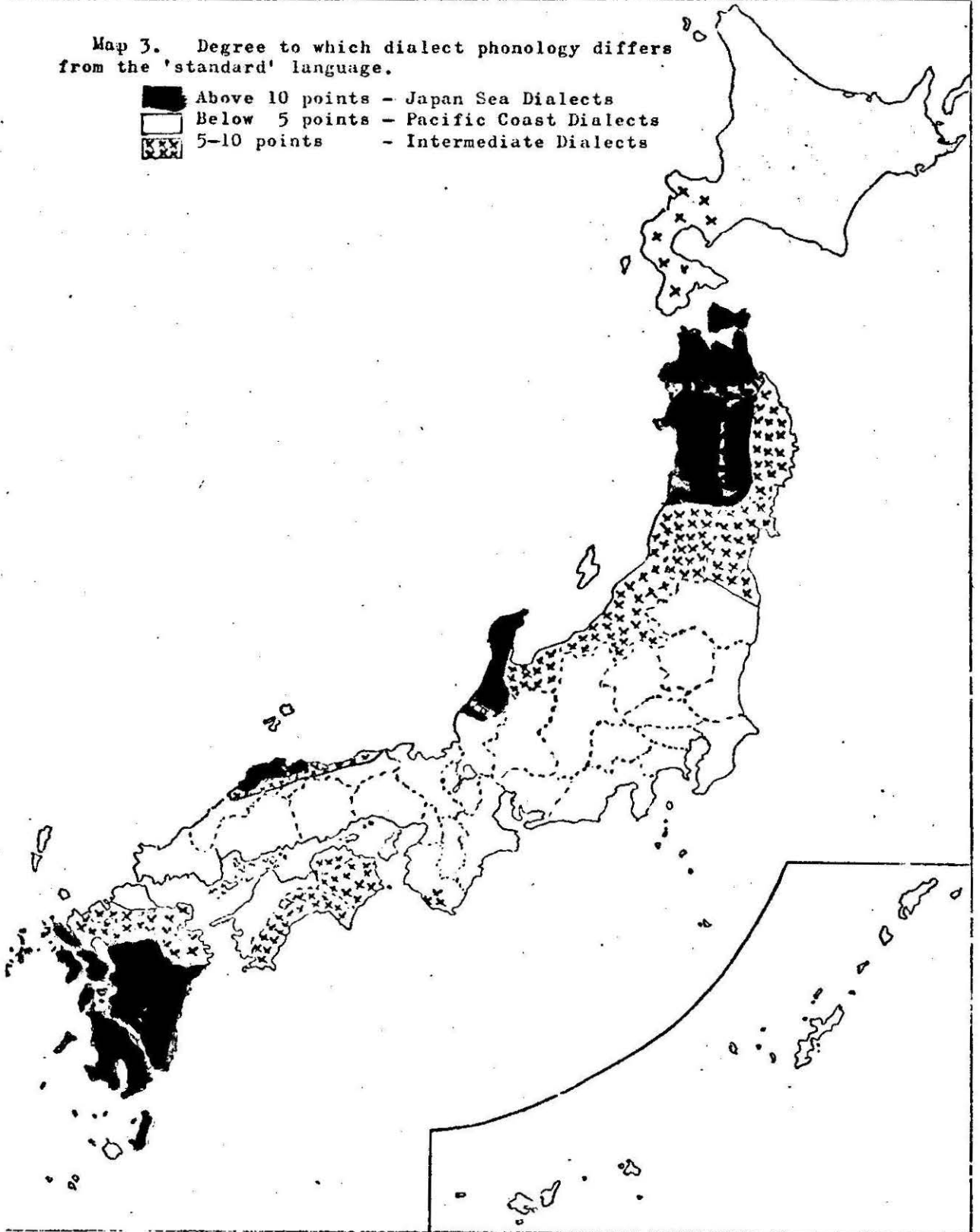
The dialects with fewer than five points occupy a continuous stretch of territory from southern Fukushima to northern Kyūshū.. The dialects with between five and ten points occur in south-western Hokkaidō, Shikoku and in areas bordering on the high scoring dialects. Only in the northern corner of Fukui does an area with over ten points border directly on an area with a score of less than five points.

The dialects grouped into three divisions according to their proximity to the pronunciation of the standard language fall into a distribution closely resembling Kindaichi's division into Japan Sea, Pacific Coast and intermediate dialects. The distribution of the three groups based on the LAJ material is shown in Map 3.

The fact that the Japan Sea dialect area is smaller than that

Map 3. Degree to which dialect phonology differs from the 'standard' language.

- |   |   |
|---|---|
|  | Above 10 points - Japan Sea Dialects    |
|  | Below 5 points - Pacific Coast Dialects |
|  | 5-10 points - Intermediate Dialects     |



proposed by Kindaichi is perhaps due to the arbitrary selection of a score of ten points as the dividing line between the Japan Sea and Intermediate dialects. It is possible, too, that the LAJ maps indicate a narrower distribution of the Japan-Sea dialects than was originally supposed.

On the evidence provided by the seven phonological features compared, there is no justification for setting up a separate Kagoshima dialect division. The isogloss for the distribution of the glottal stop /ʔ/ in forms like /kaʔ/ *to write* effectively divides the dialects of Kagoshima and the Gotō Archipelago from the other Japanese dialects<sup>47</sup> and justifies the setting up of a fourth dialect category. The dialects of Miyazaki, Kumamoto and Nagasaki, however, on the evidence of the LAJ maps clearly belong to the Japan-Sea dialect group.

The maps from LAJ do not indicate a clear east/west division of the Honshū dialects based on phonological features. Maps for the distribution of devocalization of vowels, the avoidance of vowel sequences and the overlap of vowel phonemes would perhaps make it possible to set up an east/west subdivision of the Pacific Coast dialects, although the exact position of the border would, doubtless, remain inconclusive.

The division of the dialects based on LAJ differs from Kindaichi's original map in that it includes the north-eastern half of Fukuoka with the Pacific Dialects and assigns eastern Iwate, Yamagata and northern Fukushima to the intermediate dialects and southern Fukushima and Tochigi to the Pacific Coast dialects. The Nōtō Peninsula of Ishikawa, which Kindaichi classifies with the group of intermediate dialects, on the

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<sup>47</sup> Hirayama Teruo, *Nihon no Hōgen*, p. 98. /ʔ/ occurs in Saga prefecture, southern Okinawa and Yaeyama.

evidence of the Linguistic Atlas of Japan falls into the Japan-Sea dialect group (with a score of eleven points). It is likely that the IAJ phonological maps overemphasise forms such as [kw - ] [gw - ]. If other features of dialect pronunciation such as fusion of the vowels /i/ and /e/, the non distinction of /si/ and /su/ and the devoicing of vowels had been included in the composite map, the intermediate area would for the most part be included in the Japan-Sea dialects and large sections of the Kantō and southern Tōhoku areas would be intermediate dialects.

Although the exact position of the borders may differ slightly according to which phonological features are emphasised there is a clear distinction between the pronunciation of the Pacific Coast dialects and the Japan-Sea dialects. The rather special phonological feature of the closed syllable in Kagoshima sets this dialect apart from the two main divisions. The phonology of the Kagoshima dialect is, however, similar in many respects to that of the Japan-Sea dialects.

Shibata Takeshi points out another important link between the dialect of Kagoshima and the Japan-Sea dialects in his study of the Japanese syllable.<sup>48</sup> The Japanese dialects, he claims, fall into two types; mora dialects and syllabeme<sup>49</sup> dialects. In the mora dialects the mora (the unit of time required to pronounce a consonant plus vowel sequence) is the minimal freely occurring unit of sound. It is the unit of rhythm and the bearer of the pitch accent. In the mora dialects the phonetic syllable can always be reduced to morae. The phoneme of vowel length /:/ and the syllable final consonants /N/ and /Q/ (first member of a geminate stop) are all one mora in length. In the syllabeme dialects long vowels

48. Shibata Takeshi, "On'in" 音韻 (Phonology) in *Hōgengaku Gaisetsu*, 137-161.

49. Shibata uses the term syllabeme to indicate the phonemic syllable paralleling the phonemic unit mora. "Syllable" he reserves for the phonetic syllable. *Hōgen Gaisetsu*, p. 140.



are not necessarily of two morae in length and the syllable final consonants are pronounced with the preceding vowel segment as a single indivisible syllable. For a speaker of a syllabeme dialect [ma<sup>tʔ</sup>tʃi] *match* is a disyllabic word. For a speaker of a mora dialect, on the other hand, [matʔtʃi] consists of three morae.<sup>50</sup> The dialects of Aomori, Iwate and Kagoshima are syllabeme dialects. Perhaps all the Japan-Sea dialects fall into this category.

Of the three dialects examined in the present thesis Tappi and Fukue are syllabeme dialects and Sakawa is a mora dialect. Each is representative of a major division of the mainland dialects. From the point of view of the dialect 'system' classification of Tōjō and Hirayama Fukue represents the Kyūshū dialect group. Tappi and Sakawa respectively represent the eastern and western divisions of the Honshu dialects. From the standpoint of phonology Fukue and Tappi represent the Japan-Sea dialects and Kōchi an intermediate dialect. The standard dialect of Tokyo is typical of the Pacific Coast dialects.

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<sup>50</sup> *Ibid.* p.138.

## CHAPTER 11

## TAPPI - A TSUGARU DIALECT, AOMORI PREFECTURE

## 2.0. Introduction

Tappi 竜飛 is a fishing village with a population of about five hundred, situated at the extreme northern tip of the Tsugaru Peninsula. It is about seventy kilometres north-west of Aomori city, a settlement in Mimmaya mura, Higashi Tsugaru-gun

東津軽郡三厩. Communications to the west are cut off by land by steep cliffs, Hokkaidō is visible across the narrow Tsugaru Straits and the Shimo-Kita Peninsula can be seen in the distance to the east. Communications with Aomori city are by road or rail to Mimmaya and bus to Tappi. Traditionally the sea routes have provided the main links with other parts of Aomori and Hokkaidō and even now land communications are often cut by snow in the winter months. The population of the village has swollen to about one thousand five hundred with the addition of one thousand workers carrying out preliminary work on the Aomori-Hakodate tunnel project. The workers, however, live in a new settlement on top of the mountain behind the village and have little effect on the life of Tappi. There is a noticeable absence of young people in the village especially in winter when the weather makes fishing difficult and forces men to find employment in the cities. Winter on the other hand is a good time for linguistic field work as informants have ample free time to devote to eliciting sessions.

### 2.0.1. Informants

The following analysis is based largely on the speech of Kudo Itsuzō 工藤逸蔵 who was born in Tappi in 1901 and except for three years in the army from the age of twenty-one has lived all his life there. His parents were also born in Tappi. At present he holds an important position in the local fishing co-operative.

Other informants were Tanaka Tani 田中夕二, female, born 1904; Narita Kamekichi 成田亀吉, male, born 1886 and Narita Kiwa 成田キワ, female, born 1890, wife of Kamekichi. Gotō Yasuo 後藤康夫, born and bred in Hirosaki and a native speaker of the Tsugaru dialect gave invaluable help in transcribing Tappi texts in Sydney and was a very useful informant in analysing the difficult Tappi pitch accent system.

The Tappi corpus consists of word and pitch accent lists elicited during a one week field trip in January 1970 and about two hours of natural dialogue tape-recorded and largely transcribed in Tappi. The taped material was also subjected to an acoustic analysis at the phonetics laboratory of the University of Sydney and the section on the pitch accent of Tappi dialect owes much to this analysis and the informant Gotō Yasuo.

The following, then, is a phonemic analysis of the Tappi dialect as spoken by people of the older generation. The segmental analysis is based on somewhat limited material and may possibly fail to account for all segments which can occur in the dialect. In particular only a small number of foreign loan words, those used in everyday vocabulary, were included in the eliciting material. There are many combinations

which although in theory could occur and in fact do occur in the standard language such as [putto] (sound made when trying in vain to restrain laughter, etc.) do not occur in the Tappi corpus.

## 2.1. The Segments

2.1.0. Pitch. Pitch variations are tentatively marked with  $\bar{\quad}$  over high-pitched syllables, with low-pitched vowels left unmarked. Where a form appears without an accent mark it has been taken out of a context where it did not carry any higher pitch. Where a vowel is pronounced with a falling pitch the symbol  $\`$  is used.

### 2.1.1. The Consonant Segments

The following comprises a list of all the consonant segments and environments it was found useful to recognise in the speech of Kudō Itsuzō. The phonetic nature of the segments is indicated by a brief articulatory description giving an outline of the main auditory features of each segment.

In the notation indicating environments C is any consonant, V is any vowel. V (-i) indicates any vowel other than i. C (-t) indicates any consonant other than t. Environments given in brackets indicate that these environments did not actually occur in the material collected, but in all probability do occur in the dialect, even if only in loanwords from the standard language. Unless otherwise specified V includes nasal vowels.  $\tilde{V}$  is nasal vowel only. V- $\tilde{\quad}$  is oral vowel only.

Free variation in the discussion of segments of the Tappi dialect is taken in the broad sense to account for, not only pronunciations which may be heard in free variation in the speech of a single informant, but in variations found in the pronunciation of any speakers.

of the same dialect.<sup>1</sup>

# Pause. No qualities. # is omitted in the examples listed below.

All morphemes given in [....] are preceded and followed by #.

Environment

Example

\_\_\_\_\_C (except <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>d, ɲ, ɲ, <sup>n</sup>z):

\_\_\_\_\_V

V\_\_\_\_\_

n\_\_\_\_\_

[p] Voiceless, bilabial stop.

# _____ü, e, o, a	[patapatal]	flapping
	[pän]	bread
V _____ε, a	[japasī]	sure enough
	[pe̞]	full
p _____V	[eppe̞]	full (more emphatic variant of [pe̞])
m _____V	[mompè]	women's working trousers
[p] Voiceless, bilabial stop. Palatalized. Varies freely with [p̞]		
# _____i, j,	[p̞ir̞ip̞ir̞i]	hot (of taste)
	[pj̞̥to]	whistling sound
V _____i	[p̞ir̞ip̞ir̞i]	hot (of taste)
m _____i	[omp̞idzi]	pencil
p _____i	[tappi]	Tappi

[p̞]<sup>2</sup> Voiceless, bilabial affricate. Varies freely with [p] before [i].

<sup>1</sup> This is the sense in which the term is used by Bernard Bloch, "Studies in Colloquial Japanese, IV Phonemics," *Language* 26 (1950) p.89 f.n.

<sup>2</sup> [p̞] and the other affricate segments are treated as unitary segments as they occur in the same environments as single segments and occupy the same time value. See Bloch, *op.cit.* p.91

[pɸ]

Environment

Example

#,V\_\_\_\_\_ī

[pɸīrīpɸīrī]

hot (of taste)

p\_\_\_\_\_ī

[tappɸī]

Tappi

[t] Voiceless, alveolar stop.

#\_\_\_\_\_e,o,a,ɛ

[tā]

rice field

[tè]

hand

[to]

door

[tɛ]

bream

V\_\_\_\_\_V

[patapata]

flapping

[ɸütari]

two persons

V<sup>3</sup>\_\_\_\_\_V

[kɸīta]

wore

[kɸūta]

ate

t\_\_\_\_\_V

[katta]<sup>4</sup>

bought

[ts] Voiceless, alveolar affricate.

#\_\_\_\_\_ī

[tsīgūe]

desk

e\_\_\_\_\_ī

[dʒū'etsī]

eleven

ī\_\_\_\_\_ī

[tsītsī]

milk

t\_\_\_\_\_ī

[ettsī]

one letter

V\_\_\_\_\_C,#

[tsītsī]

milk

[tʃ] Voiceless, mediopalatal affricate.

#\_\_\_\_\_a

[tʃā]

tea

#\_\_\_\_\_ø

[tʃø·do]

exactly

#\_\_\_\_\_ü

[tʃü·fā]

injection

<sup>3</sup> V indicates a devoiced vowel.

<sup>4</sup> This morpheme in rapid pronunciation becomes [kata] *bought* or a half long variant [kat·a] *id.*

[tʃ]

Environment

Example

t \_\_\_\_ V

[tʃtʃoː]

one (counting knives)

n \_\_\_\_ V

[tʃɛntʃa]

green tea

[k] · Voiceless, mediovelar stop.

# \_\_\_\_ e, o, ɛ, a

[kame]

tortoise

[ko]

child

[ke]

hair

[kɛ]

shell

# \_\_\_\_ w

[kwɑːndzi]

fire

[kwe]

eat

V \_\_\_\_ V (-i; ü)

[gwaekokɸü]

foreign country

ŋ \_\_\_\_ V

[sɛŋkakɸü]

triangle

k \_\_\_\_ V

[mikka]

three days

[k] · Voiceless, prevelar stop. Strongly aspirated.

Varies freely with *kʰ* before [i].

# \_\_\_\_ i, i

[kikɸü]<sup>5</sup>

to hear

# \_\_\_\_ j

[kjoː]

today

V \_\_\_\_ j

[kɸikjüː]

balloon

ŋ \_\_\_\_ i

[tɛŋki]

weather

ŋ \_\_\_\_ j

[bɛŋkjoː]

study

[kɸ] · Voiceless, prevelar affricate. Varies freely with [k]

in the environment \_\_\_\_ i

# \_\_\_\_ i

[kɸigβü]

to hear

V \_\_\_\_ i

[dɜɛːkɸiŋ]

tax

<sup>5</sup> This morpheme varies freely with a morpheme of the same meaning, [kigβü]

[k $\phi$ ]

Environment

Example

ŋ \_\_\_\_\_ i

[t $\tilde{\eta}$ k $\phi$ i]

weather

k \_\_\_\_\_ i

[gak $\phi$ i]

musical instrument

[k $\phi$ ]

Mediovelar stop with bilabial affrication. Varies

freely in all its environments with [k<sup>h</sup>] heavily

aspirated mediovelar stop.

# \_\_\_\_\_ ö

[k $\phi$ wre]

dark

# \_\_\_\_\_ ö

[k $\phi$ w<sup>h</sup>dzisi]

to break

# \_\_\_\_\_ ö

[k $\phi$ wt $\phi$ si]

shoes

V \_\_\_\_\_ ö

[tsigw $\phi$ e]

desk

(ŋ \_\_\_\_\_ w)

[ $\phi$ ] Voiceless, bilabial fricative

# \_\_\_\_\_ ö, e, e

[ $\phi$ wdo]

person

[ $\phi$ w $\eta$ e]

beard

[ $\phi$ wro $\phi$ ]<sup>6</sup>

wide

[ $\phi$ et $\phi$ o]

navel

[ $\phi$ wrarw]

to pick up

[ $\phi$ e]

fence, wall

[ $\phi$ e]

fart

V \_\_\_\_\_ ö

[esi $\eta$ asi $\phi$ wte]

busy

[se $\phi$ w]

purse

# \_\_\_\_\_ j

[ $\phi$ jag $\beta$ w]

hundred

[ $\phi$ j $\phi$ dz $\phi$ i]

cover of book

<sup>6</sup> The same informant Kudō Itsuzō gave three repetitions of this form. [ $\phi$ iro $\phi$ ] [ $\phi$ wro $\phi$ ] and [siro $\phi$ ]. In some morphs [ $\phi$ ], [ $\phi$ ] and [s] seem to vary freely yet as far as could be determined from the limited data available this variation does not appear to be systematic [ $\phi$ iro $\phi$ ] while often heard in the speech of Kudō Itsuzō was usually corrected to [ $\phi$ w].



[ɸɸ] Voiceless, bilabial fricative plus prepalatal groove fricative.

Environment	Example	
# _____ ī	[ɸɸī]	fire
	[ɸɸīg̃w̃e]	low varies in this morph with [s], [sīg̃w̃e]

[s] Voiceless, alveolar fricative.

# _____ V (-ü)	[sao]	pole
	[simò]	frost
	[sɛg̃aɛ]	world
	[sinasī]	east
	[sobà]	noodles
V _____ V (-ü)	[karagasa]	paper umbrella
	[asetà]	walked
	[esī]	stone
	[sisinda]	advanced
V _____ V (- ü)	[kɸüsà]	grass
n _____ V (-ü)	[kwansaɛ]	Kansai
s _____ V (-ü)	[ɛssaɛ]	one year old

[f] Voiceless, mediopalatal fricative.

# _____ V (-ī, ē, ɛ)	[fãmbɛdɛ]	talking
	[fõ·mbɛ]	business
	[fÿ·dɔ]	mother-in-law
	[fÿ·nɛŋ]	marriage
V _____ V (-ī, ē, ɛ)	[tfÿ·fa]	injection
V _____ V (-ī, ē, ɛ)	[kīfa]	train
n _____ V (-ī, ē, ɛ)	[kãnfa]	thanks

[ʃ]

Environment

Example

\_\_\_\_\_V(-i, e, ε)      [ɛʃʃo]<sup>7</sup>      together

[ç]: Voiceless, prevelar fricative.

Morphemes with [ç] before [i] have a more common free variant with [s] instead, e.g. [çimbari] *skylark* varies freely with [simbari] *id.* Before [ɛ], in certain morphemes [ç] occasionally varies with [s], e.g. [sɛnaga] is a rare free variant of [çɛnaga] *back*.

# \_\_\_\_\_i, u, e, a      [çɛnaga]      back  
    [çimbari]      skylark  
    [çumdzɪ]      fuse

V \_\_\_\_\_e      [açɛ]      sweat

[x] Voiceless, mediovelar fricative.      Varies freely in all positions with [h].

# \_\_\_\_\_o, a      [xari]      needle  
    [xà]      leaf  
    [xõŋ]      book

V \_\_\_\_\_a      [konoxa]      tree leaf

[h] Voiceless, glottal fricative.      Varies freely in all positions with [x].

# \_\_\_\_\_o, a      [hari]      needle  
    [hà]      leaf  
    [hõŋ]      book  
    [konoha]      tree leaf

<sup>7</sup> Except in slow or emphatic pronunciation the first [ʃ] segment is of very short duration [ɛʃ·o].

[b] Voiced, bilabial stop.

Environment	Example	
# _____ ü, e, o, a (ɛ)	[badzī]	bee
	[būdzī]	hit
	[bego]	cow
	[bosī]	hat
V _____ V	[sadaba]	if do
m _____ V	[sĩmbw̃]	newspaper

[b] Voiced, bilabial stop. Palatalized

# _____ i	[bĩ]	bottle
	[bĩkɛ]	frog
# _____ j	[bjo·gɛ]	illness
(m _____ i)		

[<sup>m</sup>b]<sup>8</sup> Voiced, bilabial stop. Prenasalized.

V _____ V	[sĩ <sup>m</sup> bū] <sup>9</sup>	tannin
	[çe <sup>m</sup> bè]	narrow
	[ã <sup>m</sup> bw̃rã]	oil
	[tã <sup>m</sup> bako]	cigarette

[mb] Voiced, bilabial palatalized stop. Prenasalized.

~ _____ i	[kɸ <sup>m</sup> bĩ]	neck
	[çẽ <sup>m</sup> bĩ]	snake
~ _____ j	[nĩ <sup>m</sup> bjo·]	two seconds

<sup>8</sup> The degree of prenasalization varies considerably within the speech of a single speaker and even in repetitions of the same form. At least the prenasalization occurs as a nasalization of the preceding vowel at most on the insertion of a nasal consonant, i.e. [ãbũra], [ã<sup>m</sup>bũra] and [ãmbũra] all occur as free variants. The form [ẽ<sup>m</sup>bĩ] is the form most often heard in connected speech and is the only type analysed in this account.

<sup>9</sup> The prenasalization of [b] in [sĩ<sup>m</sup>bũ] is less distinct and of shorter duration than the nasal consonant in [sĩmbw̃] newspaper.

[d] Voiced, alveolar stop.

#_____e, o, ε, a	[da]	is
	[dā <sup>m</sup> būri]	dragonfly
	[d̄eda]	emerged
	[d̄ε]	stand
	[dego]	giant radish
	[doa]	door

V_____V (a, e, ε, o)	[hā <sup>n</sup> dā]	skin
	[ed̄ò]	thread

n_____V	[ē <sup>n</sup> do]	India
---------	---------------------	-------

[<sup>n</sup>d] Voiced, alveolar stop. Prenasalized.

V_____e, o, ε, a	[ē <sup>n</sup> dò]	well
	[ē <sup>n</sup> dā]	branch

[dz] Voiced, alveolar affricate. [z] is sometimes heard as a rare free variant. Before e [dz] varies freely with [dʒ] and occasionally [ʒ].

#_____i, e, o, ε, a	[dzabūddōn]	cushion
	[dzenī]	money
	[dzibōn]	trousers
	[dzo·nī]	rice cake soup
	[dze·k̄iŋ]	tax
V_____V	[kadzi]	helm
	[edziŋo]	strawberry
	[k̄i <sup>n</sup> dzīne]	fox
n_____V(-ō)	[k̄ā <sup>n</sup> dzī]	Chinese character
[ <sup>n</sup> dz]		
Ṽ_____V (-ō)	[hā <sup>n</sup> dzī]	wooden bucket
	[mī <sup>n</sup> dzī]	water

[<sup>n</sup>dz]

Environment	Example	
$\tilde{V}$ _____ V	[ã <sup>n</sup> dzà]	birthmark

[dz] Voiced, mediopalatal affricate. Before e varies freely with [dz] and very rarely with [z] or [ʒ] also.

# _____ ü, e, o, a	[dʒarĩ]	gravel
	[dʒũnsa]	policeman
	[dʒẽmbü]	all
	[dʒoː]	lock
n _____ ü, e, o, a	[kãndʒo]	account
	[sãndʒwː]	thirty

[<sup>n</sup>dʒ] Voiced mediopalatal affricate. Prenasalized.

Environment	Example	
$\tilde{V}$ _____ V (-ĩ)	[kã <sup>n</sup> dʒe]	wind
	[ã <sup>n</sup> dʒà]	birthmark
	[ã <sup>n</sup> dʒo]	string
	[gõ <sup>n</sup> dʒwː]	fifty

[g] Voiced, mediovelar stop.

# _____ V (-ĩ, ü)	[ganĩ]	crab
	[gedà]	wooden clogs
# _____ w	[gwãndzĩdzĩ]	New Year's Day
V _____ V (-ĩ, ü)	[tagasa]	height
	[kogorò]	heart
	[ege]	pond
	[tagè]	high

[g]			
Environment	Example		
V_____w	[fo:gwatsi]		January
	[si'gwa]		water melon
[g]	Voiced, prevelar stop. Strongly aspirated.		
#_____j	[g'jũ·ŋjũ]		milk
	[og'jagũ]		guest
[gʒ]	Voiced, prevelar affricate.		
#_____i	[gʒ'ĩndza]		Ginza
V_____V	[agʒ'i]		autumn
[gβ]	Voiced mediovelar affricate.		
#_____ũ	[gβürũto]		completely
	[gβürũgβürũ]		round and round
V_____ũ	[managβũ]		eye
[r]	Voiced alveolar flap.		
#_____ũ, e, a, o, e	[r'ɛŋna]		brick
	[r'ã <sup>m</sup> pũ]		lamp
	[rok'ũ]		six
V_____V (-i)	[siranɛ] <sup>10</sup>		don't know
	[karɛ]		hot (of taste)
n_____V (-i)	[dãro]		fireplace
[r]	Alveolar flap,. Palatalized.		
#_____i, j	[r'iŋo]		apple
	[r'jo'tɛ]		both hands
V_____i, (j)	[dʒar'i]		gravel
n_____i, j	[kanr'i]		supervision
	[kanr'jo·]		bureaucracy

10:

The synonymous morpheme [sinnɛ] occurs in rapid speech.

[m̥] Bilabial, nasal stop.

Environment	Example	
# _____ ũ, e, o, ε, a	[madzĩ]	town
	[momo]	peach
	[müsirò]	straw mat
	[me]	shoot
	[mè]	tasty
	[mã <sup>n</sup> dò]	window
	[mõ <sup>n</sup> dzĩ]	letters
	[mũ <sup>n</sup> dzĩkasĩ]	difficult
	[mẽ <sup>n</sup> dzĩrasĩ]	rare
V _____ V (-ĩ)	[adamâ]	head
	[omodè]	outside
	[kemõ <sup>n</sup> ĩ]	smoke
	[amè]	rain
#m _____ V	[mã]	horse
	[mme]	plum
# _____ m	[mã]	horse
	[mme]	plum
m _____ V	[mme]	plum
~ V _____ b	[simbũ <sup>n</sup> ]	newspaper
~ V _____ p	[simpè]	worry
[m̃] Voiced, bilabial nasal stop. Palatalized.		
# _____ ã, ã̃, j	[mĩtsĩ]	honey
	[mĩ <sup>n</sup> dzĩ]	water
	[m̃jõ·dzĩ]	family name
V _____ ã, ã̃, j	[mĩmĩ]	ear
	[m̃mĩ <sup>n</sup> dzĩ]	earthworm

[m]

Environment

Example

V \_\_\_\_\_ p, b, (m)

[sám<sup>h</sup>ʃagβw̃]

three hundred

[n] Voiced, alveolar nasal stop.

# \_\_\_\_\_ e, a, o, u, ε

[nekā<sup>m</sup>bw̃]

root

[nasi]

aubergine

[nò]

field

[nè]

rice plant

[nə<sup>n</sup>dogo]

bed

[nə<sup>n</sup>dzo]

riddle

[nā<sup>m</sup>bò]

how many, how much

[nō<sup>m</sup>borw̃]

climb

[nŵŋw̃]

take off

V \_\_\_\_\_ V (-i)

[ɸw̃nà]

carp

[ɸw̃nè]

boat

[sono]

that

[sɪnŵ]

die

[maɛnɛ]

no good

[xanā<sup>n</sup>dzi]

bleeding nose

[tanō<sup>n</sup>da]

asked

V \_\_\_\_\_ d, dz, s, r,

[kãndãp]

simple

[kãndzi]

Chinese character

[danro]

fireplace

[çɛ̃nsɛ]

teacher



[ɲ]

Environment

Example

V\_\_\_\_\_n

[sĩnnɛ̃]<sup>11</sup>

don't know

n\_\_\_\_\_V

[sĩnnɛ̃]

don't know

[ɲ] Voiced, alveolar nasal stop. Palatalized.

#\_\_\_\_\_ĩ,ĩ,j

[nĩmɔdzĩ]

luggage

[nĩndzĩ]

rainbow

[ɲjũ·ɲagβũ]

entering school

V\_\_\_\_\_tʃ,f,d,(n),r

[sɛ̃ntʃa]

green tea

[kãntʃa]

thanks

[kãnrĩ]

supervision

[kãndzã]

patient

[kãndzã·sĩ]

to count

[ɲ] Voiced, alveolar nasal stop. Syllabic

#\_\_\_\_\_d

[ɲdã]

it is so

[ɲ] Voiced, mediovelar nasal stop.

V\_\_\_\_\_V (-ĩ)

[çĩɲasĩ]

east

[çũɲɛ̃]

beard

[kãɲɛ̃]

shadow

[sanarũ]

to go down

V\_\_\_\_\_k,ŋ,

[sãŋka]

participation

[kãŋɲɛ̃]

thought

[ɲ] Voiced, prevelar nasal stop.

V\_\_\_\_\_ĩ,ĩ,j,k,kʁ,(g)

[kãɲĩ]

key

<sup>11</sup> This has the auditory effect of two syllables *sĩn* and *nɛ̃* of only slightly longer duration than the two syllables in [çũɲɛ̃] *boat*, the length of the nasal [ɲn] is noticeable in slow speech but tends to be lost in rapid or careless pronunciation. The nasal onset of the stops in forms like [mã<sup>n</sup>dõ] *window* is clearly shorter than the nasal segment in [çɛ̃sɛ̃] *teacher*.

[ŋ]

Environment

Example

V \_\_\_\_\_ i, ĩ, j, k, kɛ, (g)

[nõ·ŋjo·]

agriculture

[tẽŋkɔi]

weather

[bẽŋkjo·]

study

[ŋ] Voiced, postvelar nasal.

V \_\_\_\_\_ #

[sĩmbõŋ]

newspaper

V \_\_\_\_\_ V

[sĩŋɛdzĩ]

Shin'ichi (proper name)

[rẽŋãe]

love

## 2.1.2. The non-Syllabic Vowels

[j] The non-syllabic front vowel.

# \_\_\_\_\_ ü, o, a

[jasĩ]

moxa

[jõna]

mosquito

[jũko]

hot spring

V \_\_\_\_\_ ü, ε, o, a

[hajasĩ]

shrine

[ojõŋũ]

swim

[ɸũjũ]

winter

[xajè]

fast

p, b, <sup>m</sup>b, k, g, ɟ, m, n, ŋ, r \_\_\_\_\_ ü, o, a

[põmpjõŋ]

jumping

[bjo·kɛĩ]

sickness

[kjo·]

today

[gjø·njũ·]

milk

[ɟjø<sup>n</sup>dzĩ]

fuse

[mjõ<sup>n</sup>dzĩ]

family name

[njũ·nagβũ]

entering school

[rjo·de]

both hands

[w] The non-syllabic back vowel.

Environment	Example	
# _____ e, ε, a	[war̄w̄]	to break
	[w̄ɛ]	above, top
	[w̄ɛda]	boiled
V _____ (̄) a, ε	[ew̄a]	rock, crag
	[aw̄ã <sup>m</sup> bi]	abalone
	[jow̄ɛ]	weak
k _____ a, e <sup>12</sup>	[kw̄ã <sup>n</sup> dzi]	fire
	[kwe]	eat!
g _____ a, ã	[s̄ɪgwa]	water melon
	[gw̄ãndz̄idz̄i]	New Year's Day

### 2.1.3. The Vowel Segments.

In this section, as a complete list of all possible environments would require too much space, environments shown emphasize limitations in distribution, e.g. C (-ts) indicates the segment concerned occurs before all consonants other than [ts]. Examples are omitted to save space except where it is thought particular clarification is required.

#### The Syllabic Vowels.

[ī] <sup>13</sup> High front, central vowel.

[p, b, <sup>m</sup>b, ts, dz, k̄, ḡ, φ, s, ɕ, m, n, ŋ, r] \_\_\_\_\_ and may occur before any consonant or # except <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>dz, <sup>n</sup>dz, ŋ, ɕ.

<sup>12</sup> *The Linguistic Atlas of Japan*, maps 3, 4 and 5, indicate that Tappi does not have labialization of the mediovelar stops. Informant Kudō Itsuzō had clear labialization in some forms, particularly in those listed in the linguistic atlas, but ka, ga are also common.

<sup>13</sup> In the speech of Kudō Itsuzō this vowel occurs after pause only in [īro] *colour* but in the speech of Narita Kamekichi a few forms such as [īr̄ò] *colour*, [īḡè] *pond*, [īn̄ù] *dog* [īwas̄i] *sardine*, have initial [ī]. According to Narumi Sukeichi it is usual for the Tsugaru dialects to have initial [ī] in [īd̄à] *board*, [īd̄ò] *thread*, [īn̄ù] *dog* and [īr̄ò] *colour*. Narumi Sukeichi, *Tsugaru no Kotoba* 津軽のことは (Tsugaru Speech) Kuroishi (1960) vol.1. p.88.

[ĩ] High front, central vowel. Nasalized.

C (as for [ĩ]) \_\_\_\_\_ <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>d, n, m, n, ŋ

[i̥] High central-front vowel. Devoiced.

p, ts, kɸ, ɸ, s, ɕ \_\_\_\_\_ p, p, t, ts, tʃ, ɸ, s, ʃ, (ɕ); k, kɸ, # (when not bearing a high pitch or a falling pitch).

[ĩ] High front, central vowel. Falling pitch.

C (as above) \_\_\_\_\_ #

[i̇]

C (as above) \_\_\_\_\_ C, #

[ũ] High back, central vowel.

[p, b, <sup>m</sup>b, tʃ, dʒ, <sup>n</sup>dʒ, kɸ, ɡβ, ɸ, ʃ, m, n, ŋ, r, j, # \_\_\_\_\_ C (-<sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, n, ŋ, ŋ), #

[ũ̃] High back, central vowel. High pitch.

As for [ũ]

[ũ̃̃] High back, central vowel. High falling pitch

C (as for [ũ̃̃]) \_\_\_\_\_ #

[ũ̃̃̃] High back, central vowel. Nasalized.

C (as for [ũ̃̃̃]) \_\_\_\_\_ <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, m, n, ŋ, ŋ

[ũ̃̃̃̃] High back, central vowel. Nasalized. High pitch. As for [ũ̃̃̃̃]

[ũ̃̃̃̃̃] High back, central vowel. Devoiced.

[p, tʃ, kɸ, ɸ, ] \_\_\_\_\_ [p, p, ɸɸ, t, ts, tʃ, k, k, kɸ, kɸ, ɕ, s, ʃ, #]

[ũ̃̃̃̃̃̃] High back, central vowel, half-long.

Distribution probably the same as [ũ̃̃̃̃̃̃] but limited to a small number of morphs, usually borrowings from the standard dialect.

[sen/ũ̃̃̃̃̃̃]

last week

[ũ̃̃̃̃̃̃̃̃] Same as for [ũ̃̃̃̃̃̃̃̃].

[e̥] High front vowel.

# \_\_\_\_\_ C (-mb, mb, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, n, n), #

p, b, t, d, k, g, φ, s, ʃ, m, n, ŋ, w \_\_\_\_\_ C (as above) #

[ẽ] High front vowel. Nasalized.

C (as for [e̥] \_\_\_\_\_ [<sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, n, n, n ]

[ė] Lower high front vowel. High falling pitch.

C (as for [e̥] \_\_\_\_\_ #.

[ē] Lower high front vowel. High level pitch.

C (as for [e̥]) \_\_\_\_\_ C (as for [e̥]), #

[o] Mid back vowel.

[p, b, <sup>m</sup>b, t, tʃ, d, <sup>n</sup>d, dz, <sup>n</sup>dz, dʒ, <sup>n</sup>dʒ, k, g, s, φ, x, h, m, n, ŋ, r, j, # \_\_\_\_\_

C (-<sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, n, n) #

C (as above) \_\_\_\_\_ e, a

[ō] Mid back vowel. High pitch.

Environment as for [o].

[ò] Mid back vowel. High falling pitch.

C (as for [o]) \_\_\_\_\_ #

[õ] Mid back vowel. Nasalized.

C (as for [o]) \_\_\_\_\_ <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, m, n, n, n

[ȭ] Mid back vowel. Nasalized. High pitch.

As for [õ]

[o·] Mid back vowel. Half long.

As for [o]

[õ·] Mid back vowel. Half long. Nasalized.

As for [õ].

[ɛ] Mid front vowel

C (-p, pɸ, b, <sup>m</sup>b, ts, tʃ, dz, <sup>n</sup>dz, dʒ, <sup>n</sup>dʒ, k, kɸ, kɸ, g, gɸ, ʒβ, ɸ, ʃ, ʂ, x, h, <sup>n</sup>, <sup>n</sup>, <sup>n</sup>, <sup>n</sup>) \_\_\_\_\_  
 (-<sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>d, <sup>n</sup>, <sup>n</sup>)<sup>14</sup>

[ē] Mid front vowel. High pitch.

As for [ɛ] [agē] red

ē \_\_\_\_\_# [tē] bream

[a] Low vowel.

C (-p, b, <sup>m</sup>b, ts, kɸ, gɸ, ʂ, m, n, ŋ) # \_\_\_\_\_ C (-<sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, <sup>n</sup>, <sup>n</sup>) #

V (-i) \_\_\_\_\_ C (as for [a]), #<sup>15</sup>

C (as for above) \_\_\_\_\_ V (-i)

[ã] Low vowel. Nasalized.

C (as for [a]), # \_\_\_\_\_ <sup>m</sup>b, <sup>m</sup>b, <sup>n</sup>d, <sup>n</sup>dz, <sup>n</sup>dʒ, m, m, n, n, ŋ, ŋ.

[ã̃] Low vowel. Nasalized. High Pitch.

(as for [ã])

[ã] Low vowel. High Pitch.

(as for [a])

[â] Low vowel. Falling Pitch

C (as for [a]) \_\_\_\_\_ #

<sup>14</sup> In the Tappi corpus [ɛ] occurs only before [d], [g] and [r] [asɛde] *walking*, [dɛgo] *radish*, [merw] *to be visible*. It probably occurs in many other environments, but not before the nasalized stops and affricates or [ŋ] and [ŋ]. <sup>ɛ̃</sup> does not occur in the material collected. It seems likely that [ɛ] does not occur in \_\_\_\_\_ # but [ɛ] and [ɛ̃] do.

<sup>15</sup> There is a slight labial glide between [o] and [a] as in [do<sup>w</sup>a]; the form having the auditory effect of two syllables. All vowel sequences where <sup>a</sup> is the second element could probably be treated as CVCV sequences by giving the labialized glide full consonant status. Vowel sequences in which the second element is ɸ, such as [koɸ], are also accompanied by a slight [w] glide though less pronounced than that before [a]. [ĩ] does not occur in vowel sequences.

2.1.4. The segments of the Tappi dialect are summarized in the chart below.

Point of Articulation  Mode of Articulation									
	Labial	Labial Palatalized	Alveolar	Alveolar Palatalized	Prepalatal	Prevelar (front)	Mediovelar (back)	Postvelar	Glottal
Stops Voiceless	p	p	t			k	k		
Voiced	b	b	d			g	g		
Prenasal	<sup>m</sup> b	<sup>m</sup> b	<sup>n</sup> d						
Affricates Voiceless		pʃ	ts		tʃ	kʃ	kʰ		
Voiced			dʒ		dʒ	gʒ	gβ		
Prenasal			<sup>n</sup> dʒ		<sup>n</sup> dʒ				
Fricatives Voiceless	ɸ		s		ʃ	ɕ	x		h
Compound Fricatives	ɸʃ								
Flaps			r	r					
Nasals	m	m	n	n		ŋ	ŋ	ŋ	
Non-Syllabic Vowel						j	w		
High Vowels Oral						e	i	ɯ	
Nasal						ẽ	ĩ	ɯ̃	
Mid Vowels Oral						ɛ	o	ɔ	
Nasal							ɔ̃		
Low Vowels Oral							a		
Nasal							ã		

The half-long vowels are not shown in the chart.

## 2.2. The Phonemes

### 2.2.1. Complementary Distribution

The segments may be grouped into phonemes on the basis of contrast, complementary distribution and free variation. The procedure adopted here is that described by Harris in *Structural Linguistics*<sup>16</sup>

[p]	[p]	→	/p/
[b]	[b]	→	/b/
[ <sup>m</sup> b]	[ <sup>m</sup> b]	→	/mb/
[k]	[k]	→	/k/
[g]	[g]	→	/g/
[m]	[m]	→	/m/
[n]	[n]	→	/n/
[ŋ]	[ŋ]	→	/ŋ/
[r]	[r]	→	/r/

The palatalized segments occur in complementary distribution with their phonetically similar non-palatalized equivalents, but are in contrasting distribution with each other. They are assigned to phonemes with analogous palatalized/non-palatalized members.<sup>17</sup>

A condition that all members of a phoneme display a certain phonetic similarity ensures that [k] is grouped with /k/ and not with /p/.

The affricate segments [pɸ], [kɸ] and [gɸ] occur in partial free variation with [p], [k] and [g].

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<sup>16</sup> Zellig S. Harris, *Structural Linguistics*, Chicago U.P. Chicago (1951) Phoenix Books, ed.(1960) Chapter 7.

<sup>17</sup> *Ibid.* p.111.



The affricate segments vary freely with the palatalized segments before [i̯] but only the palatalized segments occur before [j]. The affricate and palatalized segments can be included in /p/ /k/ and /g/ respectively.<sup>18</sup> [kϕ] and [gβ] are included into /k/ and /g/ as they occur in complementary environments.

The segments ϕ, ϕϕ, ç, x and h have a complex overlapping distribution. x and h occur in free variation with each other and in complementary distribution with the remaining segments. Similarly, ϕ and ϕϕ occurring in complementary distribution may tentatively be included in a single phoneme /ϕ/. [ç] on the other hand is in overlapping distribution with [h] (and its free variant [x]), with only [ç] occurring before [i̯] and [e̯] but contrasting with [h] before other vowels. In a limited number of morphs at least [ç] seems to contrast with [ϕ].<sup>19</sup> [ç], then, can be included in the phoneme /h/ and [ϕ] and [ϕϕ] grouped into /ϕ/. These two phonemes appear to be gradually falling together in the Tappi dialect and the position of the phonemic status of /ϕ/ is becoming unclear. The problem is further complicated by the presence of doublets such as [si̯g̃w̃e̯] and [ϕçig̃w̃e̯] *low*, and the tendency for [ϕçī] to be replaced by [ϕw̃], e.g. [ϕçīrar̃w̃], [ϕw̃rar̃w̃] *to pick up*; [ϕw̃do] *person*.

18. "If two segments vary freely in one environment, and only one appears in another environment, they are grouped in one phoneme, so long as the difference between the two environments is stateable in terms of the other segments (not in terms of morphemes)." *Ibid.* p.110.

19. [ç̃<sup>m</sup>bī] *cicada* and [ϕ̃<sup>m</sup>bī] *snake* seemed to constitute a minimal pair. Even if this were not so it would be necessary to keep ϕ and ç apart on the basis of [ϕ̃et̃so] *navel* and [ç̃enaga] *back*.

The alveolar fricative [ts] is in complementary distribution with both [t] and [tʃ] and on the grounds of phonetic similarity could be included with either phone. The inclusion of [ts] with [tʃ] on the other hand would give the new tentative phoneme /tʃ/ a wider distribution than either [dʒ] or [ʃ] which occur only before [a] [o] and [ü]. [ts], then, is tentatively included in the phoneme /t/.

The nasal and oral vowel segments occurring in complementary distribution can be grouped into sets of contrasting phonemes.

e	ẽ	ê
i	ĩ	î
ü	ü̃	ü̂
	ɛ	ɛ̂
a	ã	â
o	õ	ô

The seventeen vowels may be reduced to six phonemes with the extraction of the phonemes of high level pitch  $\bar{\quad}$  and high falling pitch  $\hat{\quad}$ . In phonemic notation they become /i, e, u, ɛ, a, o/.

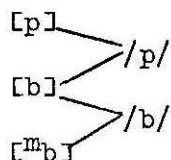
#### The length of Vowels.

All vowels except ɛ are paralleled by long or half-long vowels. In slow, deliberate speech the long vowels are easily recognisable but do not usually last as long as two short vowels and cannot be recognised as phonemic geminates. The long/short contrast is phonemic, as in [ʃö̃<sup>h</sup>bɛ̃] *business* and [ʃopɛ̂] *salty*, in slow and deliberate speech, but seems to break down in rapid discourse. The half-long vowels are almost entirely confined to compound words of Chinese

origin<sup>20</sup> and may be considered dialect borrowings. However, borrowings or not, they are part of the dialect and must be included into the analysis. Length, therefore, is phonemic and is indicated by the phoneme /·/ after the vowel concerned.

Sometimes like vowels occur in sequence across morpheme boundaries, in which case the second vowel occupies the same duration as the first and is accompanied by a rearticulation of the vowel with no pause or interruption. These vowel sequences are to be analysed as geminate vowels contrasting with the sequence of a vowel followed by the length phoneme. The vowel sequence in [konō<sup>m</sup>b̄i] *this sash* differs from that in [kɪn̄jō·b̄i] *Friday*.

The nasalized stops and affricates present more of a problem. [p] and [b] and [ᵐb] tend to occur in overlapping distribution, with [p] occurring only initially, [b] both initial and medial and [ᵐb] only medial. If these limitations on occurrence were absolute the usual Japanese analysis of similar dialects<sup>21</sup> of setting up two phonemes /p/ with allophones of [p] and [b] and /b/ with allophones [b] and [ᵐb] as in:-



would be valid. In the Tappi material, however, [p] occurs medially

<sup>20</sup> The study of Japanese morphophonemics makes it necessary to break the language into three word groups Sino-Japanese, Onomatopoeia and Yamato (native Japanese) morphs, each with its own phonemic inventory. At the level of phonology, in the sense it is used in descriptive linguistics, it is impossible to recognise such morphological differences and all must be included together. James D. McCawley. *The Phonological Component of a Grammar of Japanese*, Mouton, The Hague, (1968) p.63.

<sup>21</sup> See for example Katō Masanobu's analysis of Sendai dialect in *Hōgengaku no Subete*, p.119.

[patapata] *flapping*, [neputa] *Buddhist All Souls' Festival*, [sɪmpɛ] *worry*, [ɛppɛ] *full*, and contrasts with [b] [batatabata] *scurrying*, [ɛtsɪbã] *number one*. This means medial [b] cannot be included in the phoneme /p/ and the three phonemes /p/ /b/ and /<sup>m</sup>b/ must be established. In the same way /t/ /d/ and /<sup>n</sup>d/ are set up to account for [batatabata] *scurrying* [maðo] *target* and [mã<sup>n</sup>dò] *window*.

As /<sup>m</sup>b/ differs from /b/ in the same way as /<sup>n</sup>d/ differs from /d/; i.e. by the addition of a homorganic nasal onset the prenasalized phonemes are better transcribed /<sup>~</sup>b/ and /<sup>~</sup>d/.

The affricate segments [dz] and [<sup>n</sup>dz], [dʒ] and [<sup>n</sup>dʒ] occur in contrasting distribution and consequently are given tentative phonemic status /dz/, /<sup>~</sup>dz/, /dʒ/ and /<sup>~</sup>dʒ/.

The analysis of the nasal segments [m], [n], [ŋ] and [ɳ] presents some difficulty, as the segments occur in overlapping distribution. The following diagram shows the relative distribution of the nasal segments compared with a prenasalized phoneme and with a voiced stop.

Segment \ Environment	m	n	<del>ɳ</del>	ŋ	g	ɓ
# ___ V	x	x			x	
V ___ V	x	x			x	
<sup>~</sup> V ___ V				x		x
<sup>~</sup> V ___ <sup>~</sup> V			x			
<sup>~</sup> V ___ C	x	x	x	x		
___ #			x			

A solid line encloses segments occurring in complementary environments.

It is evident from the diagram that the nasal segments have a wider distribution than the voiced and prenasalized stops. [m] [n] [ŋ] and [ŋ] differ from /g/ as /b/ in that they can occur before a consonant segment. In this position, however, the nasal segments are in complementary distribution each occurring before its appropriate homorganic stop or fricative segment. The solution is to include the segments [m], [n] and [ŋ] occurring in the environment  $\tilde{V}\_\_\_\_\_\_C$ , and [ŋ] into a single phoneme /N/. The syllabic [ŋ] in [ŋ̩da] *it is so* is included in /N/. The phonetic quality common to all members of /N/ yet lacking in the members of /n/ and /m/ is related to the fact that they are always preceded by a nasal vowel. /N/ then, is the "prenasalized" nasal phoneme.<sup>22</sup>

The allophonic manifestation of the phoneme is governed by the nature of the following consonant segment; [m] before labials, [n] before alveolar or palatal segments and [ŋ] before velar segments. [m] and [n] occurring in other environments are included in the phonemes /m/ and /n/ with the same distribution as /g/.

The Geminate consonants may be treated in the same way as the half-long vowels. The difference in consonant length in [es̄i] *stone* and [ɛ̄ssaɛ] *one year old* is easily detected in slow, deliberate speech, but tends to be lost in rapid discourse. The length, however, is not equivalent to twice that of a single segment. The half-length phoneme /·/ occurring after vowels may be regarded as also occurring after the voiceless obstruent segments. /·/ represents a prolongation of the preceding vowel or continuant or a longer hold before the release of voiceless stop phonemes.

---

<sup>22</sup> The definition "syllable-final nasals" is perhaps less satisfactory as it is based on distribution rather than phonetic quality.

The phonemes so far established can be grouped together as follows:-

p	b	ḃ
t	d	ḏ
	dz	ḏz
tʃ	dʒ	ḏʒ
k	g	ŋ
ɸ		
s		
ʃ		
h		
r		
m	n	
j		
w		

It can now be seen that the segment [ts] which was earlier allotted to the phoneme /t/ would fit nicely into the gap in the alveolar affricate line. If [ts] is included in a new phoneme /ts/, /t/ will occur in the same environments as /d/, both being restricted against occurrence before /u/. It is proposed, therefore, to set up a voiceless alveolar affricate phoneme indicated by the unitary symbol /c/. The voiced and prenasalized equivalents /dz/ and /<sup>n</sup>dz/ may be assigned the single symbol /z/ and /ʒ/ to fill the gap left for voiceless and prenasalized alveolar fricatives.

### 2.2.2. Rephonemicization

The number of phonemes may be further reduced by the process of rephonemicization,<sup>23</sup> whereby the distribution of phonemes is made broader by reassigning phonemes with a very restricted distribution to sequences of other phonemes less restricted in occurrence.

A number of the phonemes set up in 2.2.1 are limited in distribution. /ʃ/, /tʃ/, /dʒ/, /d͡ʒ/ and /j/ occur before only /a/, /u/ and /o/. At the same time /ʃ/, /tʃ/, /dʒ/ and /d͡ʒ/, together with /t/, /d/, /d̃/, /s/, /z/, and /ʒ/ differ from the other consonant phonemes in that they do not occur before /j/.

By dividing /ʃ/ into a sequence of two phonemes /sʃ/, the total phonemic inventory has been reduced by one phoneme and the distribution of /s/ has been increased so that it now occurs before /j/. The prepalatal affricates /tʃ/, /dʒ/ and /d͡ʒ/ can be reassigned to sequences of the alveolar affricates and the front non-syllabic vowel so that /tʃ/ → /cʃ/, /dʒ/ → /dʒj/ and /d͡ʒ/ → /d͡ʒj/. The clumsy notation /dʒj/, /d͡ʒj/ is simplified to /zj/ and /ʒj/ by taking the phoneme which fills the gap left open by the absence of a voiced alveolar fricative. This rephonemicization has reduced the phonemic inventory by four and broadened the distribution of the remaining phonemes so that all phonemes except the alveolar stops now occur before /j/ and that all phonemes occurring before /j/ may also occur before /i/.

The segmental phonemes of the Tappi dialect, then, are nineteen consonant phonemes, p, b, b̃, t, c, d, d̃, k, g, ʃ, s, z, ʒ, n, r, m, ñ, n̄, N, (C); two non-syllabic vowel phonemes j and w (S), six vowel phonemes e, i, u, ε, o, a, (V) a length phoneme (·) and the pause phoneme (#) making a total of twenty-nine phonemes.

23.

Harris, *op.cit.* Chapter 9.

### 2.2.3. The Phoneme Inventory

The phonemes of the Tappi dialect with their distinctive features <sup>24</sup> and allophones are:-

/p/ The voiceless labial stops.

[p] before /i,j/

[pʰ] varies freely with [p] before /i/

[p] elsewhere

/t/ The voiceless alveolar stop.

[t] before /e,o,a,ε/

/c/ The voiceless affricate.

[ts] before /i/

/cj/ is [tʃ]

/k/ The voiceless velar stops.

[k] before /i,j/

[kʰ] varies freely with [k] before /i/

[kʰ] before /u/

[k] elsewhere

/ʃ/ The labial fricatives.

[ʃʰ] before /i/

[ʃ] elsewhere

/s/ The alveolar fricatives.

[s] before /i,o,a, /

/sj/ is [ʃ]

/h/ The glottal fricative

[ç] before /e,i/

<sup>24</sup>

The distinctive features differ from the articulatory description of the segments given in 2.1. The voiced/voiceless contrast is not distinctive in the fricatives, nasals and nasalized stops.



- /h/            [ç] before /u,o,a/ is /hj/ .  
                  [x] varies freely with [h] before /u,o,a/  
                  [h] before ε
- /b/            The voiced labial stops.  
                  [b] before /i,j/  
                  [b] elsewhere..
- /b̃/            The prenasalized labial stops.  
                  [ᵐb] before /i,j/ .  
                  [ᵐb] elsewhere
- /d/            The voiced alveolar stop.  
                  [d] before /e,o,a,ε/
- /d̃/            The prenasalized alveolar stop  
                  [ᵐd] before /e,o,a/
- /g/            The voiced velar stops.  
                  [g] before /i,j/  
                  [gʒ] varies freely with [g] before /i/ .  
                  [g] elsewhere .
- /z/            The voiced alveolar affricates  
                  [dz] before /i,e,o,a, /  
                  [dʒ] varies with [dz] before /e/  
                  Elsewhere [dʒ] is /zj/
- /z̃/            The prenasalized affricates.  
                  [ᵐdz] before /i,e,o,a; /  
                  [ᵐdʒ] varies with [ᵐdz] before /e/  
                  Elsewhere [ᵐdʒ] is /z̃j/

- /r/ The alveolar flaps  
     [r] before /i,j/  
     [r] elsewhere
- /n/ The alveolar nasals.  
     [n] before /i,j/  
     [n] elsewhere
- /ŋ/ The velar nasals.  
     [ŋ] before /i,j/  
     [ŋ] elsewhere
- /N/ The "prenasalized" nasals.  
     [<sup>~</sup>m] before /p,b,m/  
     [<sup>~</sup>m] before [p,b,m]  
     [<sup>~</sup>n] before /c,j,s,j,z,j/; [r] and [n]  
     [<sup>~</sup>ŋ] before /k,g,ŋ/  
     [<sup>~</sup>ŋ] before [k,g,ŋ]  
     [<sub>1</sub>n] after /#/ .  
     [<sub>2</sub>n] before /e,u,o,a,j,w,#/ .
- /j/ The non-syllabic front vowel.  
     [j] before /u,o,a/ .
- /w/ The non-syllabic back vowel.  
     [w] before /e,a/
- /e/ The high front vowels.  
     [ɛ̥] before /<sup>~</sup>b,<sup>~</sup>d,<sup>~</sup>ʒ,N/  
     [e] elsewhere
- /i/ The front central vowels.  
     [i̥] before /<sup>~</sup>b,<sup>~</sup>d,<sup>~</sup>ʒ,N/ .  
     [i̥] in the environment p,t,c,k,ϕ,s,h \_\_\_\_\_ t,c,k,s  
     [i̥] elsewhere

/u/ The back central vowels.

[ũ] before /b̃, ã, z̃, ñ, N/

[ũ] in the environment p, t, c, φ, s, \_\_\_\_\_ t, c, s

/ε/ The mid front vowel.

[ε] in all positions

/o/ The mid back vowels.

[õ] before /b̃, ã, z̃, ñ, N/

[o] elsewhere

/•/ The length phoneme.

/#/ The pause phoneme.

## 2.2.4. Phoneme Distribution

The chart below lists the distribution of the phonemes.

2nd Member 1st member	#	e	i	u	ε	a	o	p	b̃	t̃	c	d̃	φ	s	z̃	k	ŋ	m	n	N	h	r	j	w	.		
#		x	• x			x x x x		x x x		x x x		x x x		x x		x x x x x x x		x x x x x x x									
e		x						x x x x x x x						x x x x x x x x x x x x x													
i		x	x					x x x x x x x						x x x x x x x x x x x x x													
u		x		x				x x x x x x x x x						x x x x x x x x x x x x x x x													
ε		x										x x x													x		
a		x	x		(x)			x x																			
o		x	x					x x																			
p								x x x x x x x																	x	x	
b̃								x x x x x x x																		x	x
t̃								x x x x x x x																		x	
c								x																		x	x
d̃								x		x x x																	
φ								x		x x																	
s								x x x x																		x	x
z̃								x x x x																		x	
h								x x x x x x																		x	
k								x x x x x x																		x x x	
ŋ								x x x x x x																		x x	
m								x x x x x x																		x	
n								x x x x x x																		x	
N		x	x					x x x x		x x x				x x		x x x x x										x̃(x)	
r								x x x x x x																		x	
j																											
w																											
.																											

Only forms actually found in the corpus are listed. Potentially the distribution is much broader. ( ) probably occur in borrowings from the Tokyo dialect. o occurs in a very limited number of morphemes.

## 2.2.5. Syllabic Structure

The phonemes combine to form larger phonemic units, here designated as syllables.<sup>25</sup> Each syllable contains a peak consisting of one of the six vowels or the nasal phoneme /N/. All vowels except /e/ and /ɛ/ may be followed by the length phoneme /·/. The minimum syllable consists of a peak occurring alone. The phonemes on either side of a peak are known as margins. A margin preceding a peak is an onset and a margin following a peak is a coda.<sup>26</sup> An onset may be simple, consisting of a consonant or non-syllabic vowel (s), or complex, consisting of a consonant and a non-syllabic vowel or a voiceless obstruent and the length phoneme. Only N occurs as a coda.

The following syllable types occur as free forms:-

V	V·	VN
SV	SV·	SVN
CV	CV·	CVN
CSV	CSV·	CSVN

The syllable types C·V and C·VN cannot occur after #.

The members of vowel sequences are considered to belong to separate syllables.

The following diagram represents the structure of the syllable of Tappi dialect.<sup>27</sup>

25 For a discussion of syllabeme dialects and mora dialects, see Shibata Takeshi "On'in" 音韻 (Phonology) in *Hōgengaku Gaisetsu 方言学概説* (An introduction to Dialectology), Kokugogakkai (ed.) Tokyo (1952), reprinted 1968, p.137.

26 After Charles F. Hockett, *A Course in Modern Linguistics*, MacMillan, New York, 1958, p.85.

27 The layout of this diagram is based on Harris' representation of the first syllable in an English utterance. Harris, *op.cit.* p.153.

ONSET		PEAK	CODA
C	S	V (length)	C
k (-k <sup>*</sup> )		e	N
g	W	ε	
		a	
p (-p <sup>*</sup> )		e	
b		i .	
-b		u .	
k (-k <sup>*</sup> )		ε	
g		a .	
-ŋ		o .	
m	j	u .	
n		ε	
r		a .	
		o .	
s (-s <sup>*</sup> )		e	
z		i .	
-z		ε	
h		a .	
		o .	
∅		e	
		i	
		u .	
		ε	
c (-c <sup>*</sup> )		i .	
t (-t <sup>*</sup> )		e .	
d		ε	
~		a .	
d		o .	
		N*	

- Preceding syllable is obligatory

....→ Permissible combination

\* N occurs as a syllable peak in [ndā] *is so*, and [ŋ] *yes*

( ) Complex onsets of voiceless stop plus the length phoneme cannot occur after #

The sequence of phonemes in any syllable is indicated by a line running from left to right and not crossing any horizontal line except where a dotted arrow indicates a permissible combination. Not all possible combinations occur. Most syllables in the dialect consist of a simple onset and a short vowel, but many other combinations could theoretically exist. All forms generated in the dialect fit into this syllable scheme. The minimum syllable consists of a peak alone; the maximum of a three phoneme onset, a long vowel peak and a coda. Syllables, therefore, are not of equal duration and do not, in the Tappi dialect, produce the staccato effect which is the basis of rhythm in the dialect of Tokyo.

### 2.3. Pitch

#### 2.3.1. Pitch and Intonation

The Tappi dialect can probably be best described as having four levels of pitch with level 1 the lowest and level 4 the highest.<sup>28</sup> The pitch phonemes are:- /1/, very low; /2/, low; /3/, high and /4/, very high. These pitches combine to form intonation contours which give connotational meaning, that is to say they regulate the shade of meaning conveyed in any particular utterance. It is possible to extract from any sequence of segments occurring between pauses one of at least three different intonation contours.

- ↓ Declarative, indicated by sharp fall in pitch 31
- ↑ Interrogative, indicated by a rise in pitch 24
- Suspensive, indicated by a prolongation of the pitch of the preceding vowel, 22, 23, etc.

---

<sup>28</sup> This is essentially the analysis proposed by Martin for the description of the Tokyo standard language. It seems to apply to the Tappi material as well. Samuel E. Martin, "Morphophonemics of Standard Colloquial Japanese" Language Dissertation 47, supplement to *Language*, 28 (1957) p.17.

The system of intonation pitch is made more complicated by the presence of another overlying system of pitch distribution which distinguishes lexical items. This is referred to here as lexical pitch. Lexical pitch differs from intonational pitch in that it affects the lexical and not merely the connotational meaning of a phrase. It is possible to predict how a change in the intonation pitch contour will change the meaning of a phrase, but impossible to predict what effect the change of a lexical pitch contour will have on meaning. Intonation pitch is variable whereas lexical pitch is constant.

It is noticed that one vowel and one vowel only in a sequence of segments occurring between pauses is pronounced on a noticeably higher pitch than the others. The vowel bearing the higher pitch is called the accented vowel and the syllable bearing the accented vowel is called the accented syllable.

The accented syllable may be any syllable in a sequence of syllables bounded by pause. This pause bounded sequence may be called a pause group.<sup>29</sup> Often the pause indicated by the phoneme # is very short indeed and in rapid, connected speech is often merely a change in the accent contour. The phoneme #, then, whilst basically a phone indicating pause often indicates potential pause and the beginning of new accent phrase. In transcription of the Tappi dialect # is used to mark a very short pause or a change in the accent phrase while the intonation terminals ↓ → and ↑ mark longer pause. The intonation terminals always occur in conjunction with the pause phoneme # although to simplify transcription # is not written. # on the other hand may occur without an intonation terminal.

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<sup>29</sup> Martin, *op.cit.* p.16.



A pause group bounded by silence and an intonation terminal constitutes a primary pause group. A primary pause group may contain two or more sequences of syllables bounded by #. These sequences are secondary pause groups. Where a primary pause group contains more than one secondary pause group generally the first accented syllable will be pronounced on pitch 4 and subsequent accented syllables on pitch 3.

The function of a higher pitch accent is to divide an utterance into pause groups. It does not indicate word boundaries as such, but the boundaries of larger morphemic units. A word is defined as a minimal pause group which may stand alone. By this [hōn] *book*, and [konohōn] *this book* are words, kono is a bound form which cannot alone constitute a pause group.

At the end of a pause group there is a phonemic distinction between syllables pronounced on a high level pitch and syllables pronounced on a high falling pitch. [amē] *a sweet*, [amè] *rain*, [xanā] *nose*, [xanà] *flower*. It is necessary therefore to distinguish these two pitch types with the symbols ´ and ` . ´ can occur on any syllable of an utterance, but ` is limited to occurrence before #.

### 2.3.2. The Distribution of Accent Phrase Types

Monosyllabic accent phrases are of two types; high-level and high-falling pitch contours.

# é #: *handle* contrasts with # è #: *picture*.

#### 2.3.2.1. Nouns

Monosyllabic nouns fall into two pitch groups. In the following discussion # is omitted before and after each morpheme.

The high-level monosyllables follow the same pattern as the disyllables /amé/ *a sweet*, and /haná/ *nose*, etc.

where a following particle attracts the accent /amemó/ *a sweet too*,  
/namó/ *a name too*, etc.

i. High pitch /ó/ [●].

/ké/ *hair*, /ná/ *name*, /é/ *handle*, /cí/ *blood*, /há/ *leaf*, /hó/ *sail*,  
/tó/ *door*.

ii. Falling pitch /ò/ [●].

/phi/ *fire*, /jà/ *arrow*, /è/ *picture*, /ò/ *tail*, /nà/ *rape seed*, /hò/ *ear  
of grain*, /jù/ *hot water*, /kì/ *tree*, /hà/ *tooth*.

Accent phrases of two syllables fall into three pitch distribution contours. [●] indicates high level pitch, [●] high falling pitch and [o] low pitch. The distribution of pitch in disyllabic phrases is as follows:-

[●o]; [o●]; [o●].

/émo/ *a picture too*

/emó/ *a handle too*

/amè/ *rain*

Disyllabic nouns may be divided into three groups.

i. Initial accent.

/zěni/ *money*, /úmi/ *sea*, /úsi/ *pestle*, /óbi/ *sash*, /kíri/ *gimlet*,  
/sími/ *corner*, /nómi/ *chisel*, /hási/ *chopsticks*, /hári/ *needle*,  
/mázi/ *pine tree*, /múni/ *barley*, /sáru/ *monkey*, /círu/ *crane*,  
/háru/ *spring*, /phébi/ *snake*.

All disyllabic nouns in group one have as the peak of the second syllable a high vowel /i/ or /u/.

ii.<sup>30</sup> Tail high accent.

/amé/ a sweet, /edá/ branch, /kažé/ wind, /kabé/ wall, /kamá/ kettle,  
 /sagé/ rice wine, /tagé/ bamboo, /nagó/ box, /haná/ nose, /kagí/  
 persimmon, /ganí/ crab, /kiží/ pheasant, /kirí/ paulownia, /kuzí/ mouth,  
 /kubí/ neck, /kosí/ loins, /torí/ bird, /haží/ edge, /bazi/ bee,  
 /udá/ song, /odó/ sound, /kadá/ pattern, shape, /kawá/ river, /kurá/  
 saddle, /sitá/ bottom, beneath, /terá/ temple, /hadá/ flag, /futó/  
 person, /muné/ chest, /murá/ village, /esí/ stone, /kamí/ paper,  
 /sebí/ cicada, /cirú/ vine, /nazí/ summer, /hazí/ bridge, /fujú/  
 winter, /funí/ beard, /mazi/ town, /jugí/ snow.

30 This is Hirayama's term. *Nihongo Onchō no Kenkyū*

日本語音調の研究 p.22. Hirayama interprets the final accented pattern of the Aomori dialect [o] [o●] [o●●] [o●●●] etc.

as *heiban-gata* (平板型) or level-accent pattern /ooo/, in the same way as the [o●●] pattern of Tokyo dialect is analysed as /ooo/. Haga Yasushi and Kindaichi Haruhiko, on the other hand, claim that the Aomori dialect (which includes the dialect of Tappi) has no level accent phrases. This is because when a final accented word such as *saganá* fish combines with another word like *toru* catch, take and is pronounced as a single pause group, the accent of the first element is retained [saganatoru] catch fish. This differs from the level accent pattern of the Tokyo dialect where an accent phrase is level, i.e. accentless if the first element is accentless, e.g. /sakana/ [sakana], /sakanaotoru/ [sakanaotoru] catch fish in accordance with the rule that in a phrase with no accent mark all syllables are pronounced on a higher pitch with the exception of the first. In the Aomori dialect where a particle is added to a final accented word the final accent shifts to the particle. For example, /saganá/ fish plus /mo/ also becomes /saganamó/ fish too. However, when this combines with another word to form a single accent phrase the accent remains /sagaramótoru/ catch fish too. The present writer adheres to the view that Aomori does not have a level accent type, so that Hirayama's level pattern is here called final accented. See Kindaichi Haruhiko, *Nihongo On'in no Kenkyū* 日本語音韻の研究 (Study of Japanese Phonology), Tōkyō-dō, Tokyo (1967) p.349.

## iii. Tail high-falling accent.

/awà/ foam, millet, /egè/ pond, /erò/ colour, /ud̃è/ arm, /kawà/ skin, /kusà/ grass, /kumò/ cloud, /kurà/ storehouse, /kodò/ thing, /simà/ island, /tamà/ ball, /hanà/ flower, /harà/ belly, /jamà/ mountain, /asì/ leg, /enù/ dog, /onì/ devil, /kamì/ hair, /kuri/ chestnut, /simì/ charcoal, /tosì/ age, /namì/ wave, /nomì/ flea, /mimì/ ear, /enè/ riceplant, /kasà/ umbrella, /kadà/ shoulder, /kamà/ scythe, /kesà/ this morning, /gedà/ clogs, /sorà/ sky, /tanè/ seed, /nagà/ middle, /ɸunè/ boat, /egì/ breath, /edò/ string, /amè/ rain, /edò/ well, /ogè/ bucket, /kanè/ shade, /kubò/ spider, /ɸunà/ carp, /madò/ window, /mugò/ groom, /kodò/ Japanese zither, /cijù/ dew.

Accent phrases of three syllables fall into four pitch contours:-

[●○○], [○●○], [○○●], [○○○]. /ékágu/ draw a picture, /ekágu/ draw the handle, /amémo/ the sweet too, /adamà/ head.

Three syllable nouns fall into the four possible accent patterns.

## i. Head high accent.

/kízine/ fox, /sízime/ sparrow, /éziŋo/ strawberry, /kábudo/ helmet, /kúzina/ whale.

The number of nouns with this accent pattern is very small.

All have a high vowel in the second syllable.

## ii. Mid high accent.

/awábi/ abalone, /sjažáe/ turn shell, /asási/ morning sun, /ezíci/ five, /enózi/ life, /kjú.rjo/ cucumber, /nisígi/ brocade, /ɸibási/ firetongs, /manágu/ eye, /usáni/ rabbit, /unáni/ eel, /karási/ crow, /nenága/ back, /tagása/ height, /nežími/ mouse, /hibári/ swallow, /jonómi/ duckweed, /karási/ mustard, /kusíri/ medicine, /tajóri/ letter, /jamáe/ illness.

## iii. Tail high accent.

/egarí/ *anchor*, /ewasí/ *sardine*, /kažarí/ *decoration*, /kadazí/ *shape*,  
 /saganá/ *fish*, /sirusí/ *sign*, /cigué/ *desk*, /tonarí/ *neighbour*,  
 /hažimé/ *beginning*, /hanaží/ *bleeding nose*, /mijagó/ *capital*,  
 /jananí/ *willow*, /kemurí/ *smoke*, /ažigí/ *red bean*, /sagurá/ *cherry blossom*,  
 /cirubé/ *well bucket*, /košané/ *gold*, /komuní/ *wheat*,  
 /hadazí/ *twenty*, /cigará/ *strength*, /mugasí/ *long ago*, /joroé/ *armour*,  
 /cibasá/ *wing*, /togané/ *lizard*.

## iv. Tail-high falling accent.

/aedà/ *between*, /ɸutacì/ *two*, /ɸutarì/ *two people*, /adamà/ *head*,  
 /odogò/ *man*, /omodè/ *front*, /kanamì/ *mirror*, /katagì/ *enemy*,  
 /kodobà/ *word*, /tagarà/ *treasure*, /hagamà/ *divided skirt*, /hasamè/ *scissors*,  
 /sinasì/ *east*, /sikarì/ *light*, /ɸugurò/ *bag*, /hodogè/ *Buddha*,  
 /musirò/ *straw mat*, /kogorò/ *heart*, /aburà/ *oil*, /hasirà/ *pillar*,  
 /magurà/ *pillow*, /sinadà/ *figure*, /namidà/ *tear*, /usirò/ *behind*.

Similarly, accent phrases of four syllables fall into five patterns [●○○○], [○●○○], [○○●○], [○○○●], [○○○○], those of five into six patterns and so on. The number of pitch accent contours possible in a phrase is  $n + 1$ , where  $n$  is the number of syllables.

Nouns of four or more syllables are usually compounds where the accent of the first element becomes the accent of the compound.

Examples of four syllable nouns are /nánohana/ *rape flowers*, /simáguni/ *island country*, /kudamóno/ *fruit*, /nogonirí/ *saw*, /asanaò/ *morning glory*.

## 2.3.2.2. Verbs

Although nouns display all the varieties of pitch accent contours which may constitute an accent phrase, verbs fall into only two pitch accent contours. Verbs in their plain non-past form are final accented

or have a penultimate accent. Only one verb /kù/ *to eat* has a falling pitch. It is also the only monosyllabic verb.

Disyllabic verbs have head-high or tail-high accent.

i. Tail high accent.

/urú/ *to sell*, /ogú/ *to put*, /kigú/ *to hear*, /sagú/ *to bloom*,  
 /cirú/ *to scatter*, /cigú/ *to poke*, /nagú/ *to cry*, /narú/ *to sound*,  
 /norú/ *to ride*, /φurú/ *to fall*, /magú/ *to wind*, /jagú/ *to roast*,  
 /egú/ *to go*, /warú/ *to break*, /kirú/ *to wear*, /sirú/ *to do*, /nerú/  
*to sleep*, /karú/ *to buy*.

ii. Head-high accent.

<sup>31</sup>  
 /úci/ *to hit*, /búzi/ *to beat*, /kágu/ *to write*, /kíru/ *to cut*,  
 /ságu/ *to tear*, /tázi/ *to stand*, /cígu/ *to attach*, /tóru/ *to take*,  
 /náru/ *to become*, /nómu/ *to drink*, /φúgu/ *to blow*, /φúru/ *to fall (rain)*,  
 /mágu/ *to saw*, /jómu/ *to read*, /kúru/ *to come*, /déru/ *to emerge*,  
 /míru/ *to see*.

Three syllabic verbs similarly fall into final-accented and penultimate-accented categories.

i. Tail high accent.

/anarú/ *to give*, /asóbú/ *to play*, /ararú/ *to wash*, /udarú/ *to sing*,  
 /ođorú/ *to dance*, /kažarú/ *to decorate*, /ka.jorú/ *to commute*,  
 /kawarú/ *to change*, /kižamú/ *to chop*, /korosí/ *to kill*, /sanasí/ *to look for*,  
 /sisimú/ *to advance*, /tadamú/ *to fold*, /cinarú/ *to differ*, /narabú/  
*to line up*, /noború/ *to climb*, /wadarú/ *to cross*, /magerú/ *to lose*,  
 /manerú/ *to bend*, /jagerú/ *to burn*, /φurarú/ *to pick up*.

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<sup>31</sup> If morphological considerations are taken into consideration, in verbs the final *i* after the alveolar affricates should be analysed as *u* in analogy with other verbs. This, however, cannot be deduced from phonology alone.

## ii. Penultimate accent verbs.

/tikéru/ to attach, /enógu/ to move, /uzíru/ to move, /urámu/ to grudge,  
 /ogósi/ to wake, /omóru/ to think, /kaníru/ to limit, /kužísi/ to crush,  
 /kumóru/ to cloud over, /sanáru/ to lower, /tanómu/ to ask, /cigúru/  
 to make, /naráru/ to learn, /sikáru/ to glow, /mamóru/ to protect,  
 /okíru/ to rise, /ozíru/ to fall, /tadéru/ to erect, /togéru/ to melt,  
 /nanéru/ to throw away, /haréru/ to fine up, /kagúsi/ to conceal,  
 /aságu/ to walk.

The verb /háeru/ to enter is pronounced with the high pitch on the first syllable, but this is better treated as a two syllable verb as the diphthong ae is very short.

## 2.3.2.3. Adjectives

The adjectives fall into three accent contours; final high pitch, final falling pitch and penultimate pitch. Monosyllabic adjectives are all pronounced on a falling pitch, è good, nè not, mè sweet, but adjectives of two or more syllables belong to one of the three patterns mentioned above.

## i. Final accented pattern. [oó], [ooó], [oooó].

/agé/ red, /asé/ shallow, /azí/ thick, /usí/ thin, /aré/ rough,  
 /kadé/ hard, /karí/ light, /kuré/ dark, /agarí/ bright, /kanasí/ sad,  
 /usinuré/ dim.

## ii. Final falling accent.

/è/ good, /nè/ not, /mè/ sweet, tasty, /azì/ hot, /samì/ cold,  
 /cebè/ narrow, /tagè/ high, /cikè/ near, /ɸukè/ deep, /jasì/ cheap  
 /wagè/ young, /warì/ bad, /sjop·è/ salty, /ejasì/ humble,  
 /azimasì/ happy.

ii. Penultimate accent pattern.

/kóe/ *thick*, /osóe/ *late*, /kuróe/ *black*, /siróe/ *white*,  
/menóe/ *pretty*, /figúe/ *low*, /macikóe/ *dazzling*, /sjak<sup>o</sup>óe/ *cold*.

#### 2.4. Pitch in Inflected Forms and Particles

In this section no attempt is made to formulate morphophonemic rules for the allocation of pitch in inflected forms. Such an analysis is beyond the scope of the present thesis. On the other hand a description of change in pitch in inflected forms is essential to give an idea of what the dialect sounds like. The grammatical categories are as for the standard language.<sup>32</sup>

The accent pattern of the nouns, verbs and adjectives listed from 2.3.2. are those patterns which occur when the forms are given alone as citation forms, that is to say where they constitute the entire pause group. As a general rule where two forms, both of which can occur alone as an accent phrase, are pronounced in a single pause group only the high pitch accent of the first element remains. Where one of the elements in a compound phrase cannot occur alone, i.e. when it is a particle or verbal suffix there is often a change in the original accent of the free form.

##### 2.4.1. Pitch of Particles

The Tappi dialect uses the diminutive nominal suffix -ko (sometimes k<sup>o</sup>). This suffix always carries the accent in an accented phrase. Where the original form had a final high level accent the form with -ko will have a high level accent, /hak<sup>o</sup>·ó/ *leaf* from há but a falling accent where the original form had a falling pitch, /hak<sup>o</sup>·ò/ *teeth* from /hà/.

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<sup>32</sup> As in Bernard Bloch, "Studies in Colloquial Japanese, II, Syntax" *Language*, 22 (1946) 200 - 48.



Similarly /amekó/ *sweet*, /amekò/ *rain*.

If the original form is accented on a syllable other than the last the suffix -ko carries a falling pitch /hasikò/ *chopsticks* from /hási/.

-sa. The suffix indicating direction, -sa, behaves in exactly the same way as -kò. /esá/ *to the handle*, /esà/ *to the picture* /murasá/ *to the village*, /jamasà/ *to the mountain*, /mazisà/ *to the pinetree*.

-sa may be suffixed to a form which already has the suffix -ko attached to it. /murakosá/ *to the village*, /jamakosà/ *to the mountain*. In this case the accent of -sà overrides that of -ko.

-ba. The emphatic objective suffix -ba is of the same kind as -ko and -sa. /saganabátoru/ *catch fish*.

In actual connected speech -ko, -sa and -ba would rarely occur with a falling pitch. Falling pitch occurs only before #. Most pitch accent phrases containing -ko, -sa and -ba are followed by a predicate in the same breath group. /murasáegu/ *go to the village*, /jamasáegu/ *go to the mountain*, /esácigeru/ *attach to the handle*.

-máde. The suffix -máde *up to, until* retains its head-high accent regardless of the accent pattern of the noun to which it is attached. /jamamáde/ *up to the mountain*.

The copula dá *is, equals*, and dábe *will be, probably is* the non-past presumptive of the copula <sup>33</sup> also dominate the accent phrase erasing all other high pitches. /muradá/ *it is a village*, /tagɛjamadábe/ *it's a high mountain, isn't it?*

<sup>33</sup> These terms for the inflectional categories are from Bloch's analysis of the Tokyo dialect. "Studies in Colloquial Japanese, Part 1, Inflection," *Journal of the American Oriental Society*, 66. 97-109 (1946).

## 2.4.2. Pitch in Inflected Forms

Just as nouns vary in accent according to the following particle, verbs have different accent patterns according to the category of inflection. The non-past indicative form given above is the basic form from which other forms can be predicted in accordance with the following rules.

The past indicative inflection<sup>34</sup> -ta, (-da)

i. Final accented non-past form → Final accented past indicative.

/urú/	<i>sell</i>	→	/ut.á/	<i>sold</i>
/karú/	<i>buy</i>	→	/kat.á/	<i>bought</i>
/nagú/	<i>cry</i>	→	/naedá/	<i>cried</i>
/nerú/	<i>sleep</i>	→	/nedá/	<i>slept</i>
/ararú/	<i>wash</i>	→	/arat.á/	<i>washed</i>
/kižjamú/	<i>chop</i>	→	/kižjandá/	<i>chopped</i>

ii. Penultimate accented non-past form → (1) Penultimate accented past indicative when the final syllable does not contain a long consonant  
(2) final accented past indicative when the final syllable has a long consonant or the penultimate syllable is closed except that (3) vowel stem penultimate accented verbs of two syllables<sup>35</sup> are final accented in the past indicative, e.g.

1.	oóo	→	oóo	
	/kágu/	<i>write</i>	→	/kaéda/ <sup>36</sup> <i>wrote</i>

<sup>34</sup> *Ibid.*

<sup>35</sup> This also applies to the falling accented monosyllabic verb *kù*.

<sup>36</sup> As the diphthong *ae* here is very short occupying a single syllable, the accent mark is located midway between the two vowels. The form *kaéda* then is to be regarded as penultimate accented.

/ságu/	tear	→	/sēda/ <sup>37</sup>	tore
/mágu/	sow	→	/māeda/	sowed
/ozíru/	fall	→	/ozíta/	fell
/kagúsi/	conceal	→	/kagúsita/	concealed
/nanéru/	throw away	→	/nanéda/	threw away

2.	oó	→	ooó	
/kíru/	to cut	→	/kit.á/ <sup>38</sup>	cut
/tázi/	to stand	→	/tat.á/	stood
/tóru/	to take	→	/tot.á/	took
/nómu/	to drink	→	/nondá/	drank
/jómu/	to read	→	/jondá/	read
/amáru/	to remain	→	/amat.á/	remained
/enógu/	to move	→	/enondá/	moved
/uzíru/	to shift	→	/uzit.á/	shifted

but

3.	/kù/	to eat	→	/kut.á/ or /kutá/	ate
	/déru/	to emerge	→	/dedá/	emerged
	/kúra/	to come	→	/kitá/	came

The presumptive verbal suffix -be.

/-be/ erases the original accent of the verb and gains an accent itself. It becomes -bé, (occasionally-<sup>˜</sup>bé) after a final accented verb and -bè (occasionally-<sup>˜</sup>bè) after a penultimate accented verb.

/egubé/ probably will go or let us go, /kagubè/ probably will write, let us write.

37 The occurrence of the mid front vowel e is not predictable. In some forms it was given as a free variant of the diphthong ae, in others it was rejected. The informant Kudo Itsuzo rejected its use in /káeda/ wrote.

38 In rapid speech the long consonant is barely audible, [kəi<sup>t</sup>tá] or even [kəittá] cut contrasts clearly with [kəitá] came.

The negative suffix /-nɛ/

/-nɛ/ behaves in the same way as /-be/, always bearing the accent (if the verb phrase occurs alone as a breath group) -nɛ́ after final accented verbs and -nɛ̀ after penultimate accented verbs.

/eganɛ́/ *don't go*, /kaganɛ̀/ *don't write*.

## 2.5. Prominence

It was not possible to ascertain what role prominence plays in the Tappi dialect. A pitch recorder analysis shows that the amplitude does not always follow the frequency curve exactly, though generally greater amplitude tends to be associated with higher frequency. Where a particular part of an utterance is emphasised there is a strong stress placed on it regardless of its original pitch value.

The general auditory impression of the Tappi dialect is that stress is more noticeable than in other dialects. This may be due to the fact that only one high pitched syllable occurs in a breath group so that the pitch accent is less obvious than it is in other dialects where high pitch is often sustained over a span of syllables. Generally in language pitch is associated with the mora and stress with the syllable. It may be that in the Tappi dialect, where the syllable is the main freely occurring phonemic unit, stress is more important than has hitherto been supposed.

### 2.5.1. Rhythm and Speed

The Tappi dialect lacks the staccato effect heard, for example, in the dialect of Tokyo as syllables are not all of equal length. Syllables tend to run together and apocope is common [kãndʒã] for [kã<sup>n</sup>dʒe wa] *the wind*. The auditory effect of the dialect is that it is spoken in short, unbroken bursts of low pitch syllables punctuated with high pitched syllables. There

is a tendency towards a rise in pitch at the end of a pause group.

According to Konoshima Masatoshi the rhythm of the Tsugaru dialect differs significantly from that of the Nambu dialect of the east of Aomori prefecture. <sup>39</sup>

The Tsugaru rhythm, he says, gives the impression of rapid, undulating speech compared to the rather flat, slow rhythm of Nambu. This is in spite of the fact that the word accent (lexical pitch) of the two dialects is almost the same. This difference in speech rhythm and intonation has been seen as echoing differences in the character of the peoples of Aomori; the brisk, active people of Tsugaru and the composed, stolid people of Nambu. <sup>40</sup>

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<sup>39</sup> See Konoshima, *Aomori-ken no Hōgen*, 青森県の方言 (The Dialects of Aomori Prefecture) Tsugaru Shobō, Aomori (1968) p.67

<sup>40</sup> Such non-scientific observations aside, if there is a difference in the intonation of the two dialects a comparison of the two dialects might yield important information on intonation of Japanese. Konoshima suggests that the difference between Tsugaru and Nambu rhythm (intonation) can be clearly distinguished in the N.H.K. recordings of the dialects of Kuroishi 黒石 (Tsugaru) and Gonohe (Nambu) in the *Zenkokū Hōgen shiryō*, Vol.1.

## APPENDIX TO CHAPTER 11

## TAPPI DIALECT TEXT

The following text is a portion of a conversation recorded at the Okuya ryokan (inn) in Tappi on the morning of 27th January, 1970. The informants who appear in the section transcribed are:-

f.1 Narita Kiwa, female, born 1890.

f.2 Narita Kiwa's niece, owner (?) of the Okuya ryokan, age about 40.

f.3 Tanaka Tani, female, born 1904. All informants were born and bred in Tappi and have spent most of their lives there.

The tape-recorder was switched on unnoticed during a conversation on the value of the kimono compared with the working trousers, *monpei*. The tape represents an unsolicited, random sample of the speech of old women in Tappi. The tape was transcribed immediately after the conversation with the help of Tanaka Tani. Later the material was tested on a pitch meter at the Phonetics Laboratory of the University of Sydney and the pitch distribution checked with the aid of an Aomori informant, Gotō Yasuo.

The first line of transcription is a broad phonetic transcription. Intonation and stress have been marked only where they seemed particularly obvious. The second line is a phonemic translation in accordance with the analysis given in Chapter 11. Due to typographic difficulties some of the symbols used in the transcription of the text differ from those used in the analysis.  $\ddot{a}$  is replaced by  $\ddot{a}$  and  $\phi$  is hand-written.



nāmbóxo·jūjōnnagademotēno· ↗ sositēbarárūwadaē ↘

naNbo ho· ju joNnaga de mo t.e no· ↑ sositēbaráru wa dae ↓

いくら そういう世の中 でもってね そして 笑うでしょう

soçébaorenototfawarēterü → nanimo[sabēnzēdamátēwaraterü ↓]

so· heba ore no tocja warateru → nanimo sjabenzede# damáte warateru ↓ /

そう言えば家の主人は笑っている 何も言わないで 黙って笑っている

f 3, [# mügasine → batfajo. ↗ mügásineatagodosábēde → ]

/# mugási ne → bácia jo → mugási ne ataxgodo sjábēde → /

昔 おばさんよ 昔 あた事を話して

f 1, [# sítabátē gürúto baserēdesimatáwanō. ↘ oreñojütódadzi

/# sita báte# gurút·o baserede simat·a wa no· ↓ ore no jütódazi

だけど さっぱり忘れてしまった わよ 家の 人たちは

kəigβüwadaē ↗ wáne· → sítádesiréndza ↓ emánokodoōboēde·dēbana·

kigu wa dae wá ne sitáde # sirÉN zja emá no kodo oboedexé deba na·#

聞くらわよ 私に しかし 知らない 今の事 覚えていければ良いでしょう

kosadáena: ↓ ütotosiēgāng togzina nāndēmokāndemo<sup>o</sup>m<sup>m</sup>bēde → dógodemo

ko· sadáe na· út·o tosi eganētogi na naN demo kaN demo# oōbēde → dōgo demo

こう言うよ うんと年を取らない時には何でもかんでも覚えて どこでも

katšamédeasēdamōndabatēna· ↓ emáwagānnēmōndaō ↓

# kacjaméde asēda moN da bate na· ↓ emá waganNēmōN daoN ↓

かせいで 歩いたもんは けれどもね 今 分らないもんだよ

No matter how much times have changed I say (there's a limit). See, you all laugh. when I talk like this my husband doesn't say a word he just sits there and laughs. f 3 (friend) Auntie, I say Auntie, tell us about the old days. f 1, But I've forgotten completely. People at home ask me, but I don't know. I tell them I'm lucky if I can remember what's happening these days. Before I got so old I could remember anything. I went out working all over the place, but now I can't. (wagannē in the sense of "no good" is usually used in the Nambu dialect. Tsugaru uses maene instead. Here the sense seems to be "no good" rather than "don't understand" as the standard language [wakaranai] (don't understand) would suggest.



xádzĩdzũ·damõnda omédádzi → sõndemosagasiũtõdabaębatę↓wa

háiziju· da moN da# omédázi → soN demo#sagasi ęutõ daba e batę↓wa

八 十 だ も の お前 たち ぞれ ども 賢い 人 なら いいけど 私 は

xãηkakęusę dogodęna·mo ↓ f 2, [# bãtřasoředęmõmĩtasĩka

haNkakusędogo de na·mo f 2, / # bãcja sore demo mimi tasika

ば か だ から ね おばさん ぞれ ども 耳 が たしか

dabjõnno· ↓ f 1, [# mĩmĩdomanęũdabano· ↓ sãęũsadabamęřanę

da bjoN no· ↓ / f 1, / # mĩmĩ do # manágu daba no· sãęũ sadaba męřane

でしょう ? 耳 と 眼 (なら) ねえ 裁縫 すれば 眼鏡

kagęębamaęęę ↓ xarĩtogogũmęđęno· ↓ de → tãřdakosĩtearũgũdabano· ↓

kageneba maene ↓ harĩ togogu męđę no· ↓ de → tãřa kosite#arũgu daba no· ↓

かけなければ だめだ 針(穴)が 遠く 見えて ね だ ちして 歩けば ね

dzĩttõmugonojamãnękagętera → ęũnędęmõmęřũwad aę

zit·o mugo no# jamã ne kagętera ęũnędęmo męřũ wa dae

ずと 何(の)の 山(島)に ちかかっている 舟 ども 見える ねよ

ádzĩnodzĩttoaęteradęmo ↓ sĩdãba → sãęũsadabamęřãnękagęębamaęęę ↓

ãzi no zit·o anętera demo ↓ sĩdãba → sãęũ sadaba#męřãne kageneba maene ↓

あちの ずと(何(の)の方)は ちかかっても ちか 裁縫 すれば 眼鏡 かけなければ だめだ

męřãnędabamãdatosĩtorebãmãdakęĩgęębãmãęęę ↓

męřãne daba# mãda # tosi toreba # mãda kigeneba#mãene ↓

眼鏡 は 又 年 を 取 たら 又 替 え なければ だめだ

I'm eighty you know! Even so, it would be alright if I were a clever person, but I'm such a fool...

f 2, Auntie, your hearing is good though, isn't it?

f 1, Yes, my hearing and my sight. I need glasses for sewing though.

No matter what I do I have trouble seeing the hole in the needle. If

I'm just walking about like this I can see a ship right over there up

against those mountains - even if it is going along way, way over there.

But when I'm sewing I have to wear glasses. Another thing with glasses

is that you have to change them as you get older.

mitsimokcigédadae → xádzidzū · siriñemonatāndaō ↓ sītābate →  
 micí mo # kigéda dae → házizju · siri ne mo nataN daoN ↓ sita bāte →  
 三度も 替えたよ 八十過ぎ にも なたんであもの かし  
 oradádzidakja. → na · mo → mimitogūi ㊦ ütēmañemono → ano ㊦ ütódaba ↓  
 oradázi dakja. ná · mo mimi togūi ㊦ te# máene mono → ano ㊦ utó daba ↓  
 家でも ね 耳が遠くて ためたもの あの人は  
 sītáde → ano ㊦ ütótēranoterāsōndε sītābate ↓ manágūi a? → mimi kēgēne  
 sitáde → ano ㊦ utó tera no tera soNδε sitābate ↓ manágu a → mimi kigen  
 そして あの人は寺の 寺総代 したけれども (目) 耳が聞こえない  
 dogodeno. → jamédádane. ↓ jamédéoreno → tót, sado → adzino → kámīno  
 dogo de no. → jamedá da ne ↓ jamedé\*ore no tót, sa do → azí no → kámi no  
 いら ねえ やめたんだよ やめて家の とっちゃん(長男の事)あちの上の  
 ore garabędzinenataododo ㊦ ütári → sōndε sāñenaterūwadaenē ↓  
 ore gara bezi ne nat · a ododo ㊦ ütári → sōNδε saN ne ㊦ nat · eru wa dae ne. ↓  
 家から別に 変った弟と =人 総代さんになつたわよ  
 orénotot, saesiñés ㊦ ütē māñedahā "de: → māñetesábedemo ㊦ kiganéda ne ↓  
 ore no tocja ㊦ esiñési ㊦ ute māene da hañe. → māene te ㊦ sábedemo ㊦ kiganéda ne ↓  
 家の 長男は忙しくて ためだから... (でも) ためたと言つても聞かないよ  
 dá · mojarūi ㊦ ütore mōnto ↓ xa? xa? xádzikēdanēsikanε mōndaō ↓  
 dá · mo # jāru ㊦ utone moN to ↓ ha ha náziken dane sika ne moN daoN ↓  
 だつて やる 人がいないと 八軒(お)いしか ないもんだよ  
 egú ㊦ ütone debana. ↓  
 egú ㊦ utone deba na. ↓  
 行く 人がいないよわね。

I've had three pairs. But I'm past eighty, you know. But even in our family he ( my husband) is very hard of hearing. He used to be a representative at the temple, but because he can't hear, you know, he gave it up. He gave it up and our eldest boy and his younger brother who lives down there away from our house are doing it between the two of them. Our eldest son says he can't because he's too busy, but no matter what you say they won't listen. There's just nobody to do it.. There are only eight households and there is no one to go.

## CHAPTER 111

## SAKAWA-MACHI - A KOCHI DIALECT

## 3.0. Introduction

Sakawa-machi, Takaoka-gun, Kōchi Prefecture 高知県

高岡郡佐川町, an old former castle-town with a population of about sixteen thousand five hundred, is situated by the main railway line about twenty kilometres west of Kōchi-shi 高知市.

The town is an amalgamation of the four villages of Tokano.

斗賀野, Ogawa 尾川, Kuroiwa 黒岩 and Kamo 加茂, joined at the time of the reallocation of rural boundaries in 1953.

The area is an important sake producing district. It also has extensive limestone deposits, with a factory and mine established in Sakawa for a large Osaka-based cement company. The local inhabitants of Sakawa claim that it is "an acknowledged fact" that Sakawa people are different from other people in the prefecture and that the town has always stressed cultural activities and preserved close ties with Kyoto for over three hundred years. The language of Sakawa is said to be polite<sup>1</sup> and refined compared with the dialect of Kōchi-shi and other parts of the prefecture.

## 3.0.1. Informants

The analysis given here is based primarily on the speech of Okazaki Noboru. The informants interviewed were:-

<sup>1</sup> This remark was made by Myōjin Tasaku 明神田作 a school teacher who has travelled widely throughout Kōchi prefecture.

Okazaki Noboru 岡崎登, male, born 1907 in the Togano district of Sakawa-machi. A retired, former taxi driver he was educated and grew up in Sakawa. He spent one year in Kyoto at the age of nineteen and later worked for a year in Motoyama and for three years in Kōchi-shi. Okazaki has lived continuously in Sakawa since 1945.

Myōjin Tasaku 明神田作, male, was born 1907 in Takaoka-gun. His parents were born in Sakawa-machi. A school teacher, he has taught widely in Takaoka-gun and Kami-gun.

Fujita Keiichi 藤田圭一, male, was born in 1936 in the Kuroiwa district of Sakawa-machi. He moved to Tosa-gun at the age of six, but returned six years later to Sakawa where he has lived since.

Yoshii Yasuo 吉井保雄, male, born 1920 in Kuroiwa. He has lived all his life in Sakawa except for six years in the army from the age of nineteen.

Okabayashi Toyoko 岡林豊子, female, born 1911 in the central district of Sakawa.

Nakayama Ugetsu 中山卯月, male, born 1910. Director of the Sakawa Library and Ethnological Museum.

Ueda Masakazu 植田政一, male, born 1921 in the Itazuri hamlet of the central district of Sakawa. Apart from six years serving abroad in the army, he has lived all his life in Sakawa.

Taniwaki Hirohiko 谷脇博彦, male, born about 1925 in Sakawa.

### 3.0.2. The Corpus

The material for the following analysis was collected over a period of one week in November 1968. Suitable informants were chosen from a group of local residents assembled by an official at the Sakawa village office. All interviews were carried out in the village office.<sup>2</sup>

A six hundred word list and detailed accent eliciting material specially prepared for the study of Japanese dialects by Professor Teruo Hirayama of Tokyo Metropolitan University, and an additional three hours of tape-recorded conversation between informants Okazaki and Ueda were used in making the following phonemic analysis. The taped material was transcribed in Sydney in 1970 with the aid of a Kōchi informant, Miss Saeko Tsuda (32) and pitch recording equipment of the Department of English phonetics laboratory at the University of Sydney<sup>3</sup>

In Sakawa there are many utterances which are distinguished from one another by tone contours alone. For the most part where the difference is one of grammatical meaning such as that of statement compared with question or request compared with order, difference in contour seems to be on the final syllable of the utterance.

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<sup>2</sup> The formal surroundings of the village office may have made the informants slightly uneasy. This would be unlikely to affect the analysis of the phonology of the dialects. In eliciting lexical items it is essential to conduct interviews in the atmosphere of the informant's usual environment.

<sup>3</sup> No complete acoustic analysis of the recorded material was undertaken. The pitch recorder was merely used as an aid in assigning pitch contours to the transcription. Distinctions in pitch and intensity beyond those regarded as meaningful by the informant were ignored.

To account for these differences in sentence intonation it is necessary to set up four phonemic pitch levels.<sup>4</sup> Forms in citation, in which the connotational intonation patterns do not occur, however, are best described with two pitch levels, high and low. In the examples listed in 3.1. syllables bearing a relatively higher pitch are overlined. Lower pitched syllables are left unmarked.

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<sup>4</sup> For a discussion of pitch at the connotational and lexical levels, see 3.3. - 3.4.

## 3.1. - 3.4. The Analysis

## 3.1. The Segments

The segments recognised in the speech of Okazaki Noboru are set out below with the environments in which they occur. In the examples given below phonetically long vowels (indicated by: after the short vowel segment) appear in the environments as short vowels plus the length element:. They are not listed separately except in the section on the distribution of vowel segments where the most common environments of the long vowels are given.

A raised horizontal line over a segment or a span of segments indicates those segments are pronounced on a higher pitch than unmarked segments.

C indicates any consonant, V any vowel. V (-i) indicates any vowel other than i; C (-t,d) any consonant other than t or d. The syllabic unreleased segments and the long continuant segments occupy the same time as a CV sequence.

## 3.1.1. The Consonant Segments

[#] Pause. No qualities. Occurs before all V and C except prenasalised stops, the unreleased stops and the long continuants.

Occurs after V, ŋ, η.

[p̥] Voiceless, bilabial stop. Slightly aspirated.

Environment	Example	
# _____ V (-i, i)	[p̥āŋ]	bread
	[p̥ēŋ]	pen
pʔ _____ V (-i, i)	[kapʔpa]	river goblin
m _____ V (-i, i)	[kampai]	dry glass
[pʔ] Voiceless, bilabial stop. Unreleased.		Syllabic.
V _____ p	[kapʔpa]	river goblin
[p] Voiceless, bilabial stop. Palatalized.		

Environment	Example	
#,V_____i,ĩ,j	[p̄iripiri]	hot (taste)
	[p̄ĩŋ]	pin
	[pj̄õmp̄jõŋ]	jumping
m_____i,ĩ,j	[k̄amp̄jo:]	dried gourd
[pʔ]:	Voiceless, bilabial stop.	Palatalized. Unreleased. Syllabic.
V_____p	[xapʔpjaku]	eight hundred
[t]	Voiceless, alveolar stop.	Varies freely <sup>5</sup> in all positions of its occurrence with the voiceless dental stop.
#_____e,o,a,ẽ,õ,ǣ,	[te]	hand
	[tõŋgi]	friend
	[taboko]	tobacco
n_____V(- high vowels)	[k̄ãntãŋ]	simple
V_____V(-high vowels)	[hata]	Hata (county)
[tʔ]:	Voiceless, alveolar or dental stop.	Unreleased.
V_____t, t̄,	[d̄zãtʔta]	was
[t̄]	Voiceless, dental stop.	Varies freely with [t]
[t̄ <sup>h</sup> ]	Voiceless, dental stop.	Aspirated. Varies freely with [t <sup>s</sup> ] and [ts].
#_____u	[t̄ <sup>h</sup> ũm̄bo]	deaf
V_____u	[it̄ <sup>h</sup> u]	when

<sup>5</sup> Varies freely, here is taken in the wider sense suggested by Bloch. That is free variation is not limited to the pronunciation of a single informant, but covers variation found in all speakers of the same dialect. See Bloch *op.cit.* p. 20, f.n.



[t<sup>s</sup>] Voiceless alveo-dental affricate. Weak affrication. Varies freely with [t<sub>χ</sub><sup>h</sup>] and [ts].

Environment	Example	
#,V <u>    </u> u	[t <sup>s</sup> u <sup>̄</sup> m̄bo]	deaf
	[it <sup>s</sup> u]	when

<sup>6</sup>  
[ts] Voiceless alveo-dental affricate. Strong affrication. Varies freely with [t<sub>χ</sub><sup>h</sup>] and [t<sup>s</sup>].

#,V <u>    </u> u	[tsum̄bo]	deaf
	[itsu]	

[tʃ] Voiceless, prepalatal affricate. Varies freely with [tʃ]: before i, i,<sup>7</sup>

Environment	Example	
# <u>    </u> i,u,o,a,i,ŭ,ɔ,ɛ,	[tʃa]	tea
	[tʃo:nā]	a type of small axe
	[tʃu:te]	saying
	[tʃiʔd <sup>z</sup> u]	cheese
V <u>    </u> V <sup>(-e)</sup>	[ni:tʃu:]	looks like
n <u>    </u> V	[ŋtʃaŋ]	uncle
tʔ <u>    </u> V	[itʔtʃaku]	one (suit of clothes)

<sup>6</sup> This free variant occurs only a few times in the speech of Okazaki, but is more common in Ueda's speech and the segment most heard in young informants. This is perhaps due to the influence of the standard language. The analysis of sounds like this presents a problem in the study of Japanese dialects, where, particularly in the speech of younger persons, dialect forms tend to vary freely with the corresponding forms in the Tokyo standard language. Here these dialect borrowings are treated in the same way as Bloch treats foreign loans in standard Japanese. As there is no descriptive test to isolate such loans they must be described as part of the dialect. See Bloch *op.cit.* p.87.

<sup>7</sup> [tʃ] before i, i is confined to younger speakers. Only [tʃ]: occurs in this environment in the speech of Okazaki.

[tʃ]: Voiceless, postpalatal affricate. Varies freely with [tʃ]<sup>8</sup>.

## Environment

## Example

# ___ i	[tʃitʃi]	father
V ___ i	[mitʃi]	road
tʃ ___ i	[matʃtʃi]	match
n ___ i	[sɛntʃi]	toilet
[k]	Voiceless, mediovelar stop	
# ___ V (-i, ɪ, j)	[karaθu]	crow
V ___ V (-i, ɪ, j)	[hakama]	divided skirt
kʔ ___ V (-i, ɪ, j)	[gakʔko:]	school
ŋ ___ V (-i, ɪ, j)	[saŋkaku]	triangle

[kʰ]: Voiceless, mediovelar stop. Aspirated. Accompanied by bilabial friction. Varies freely with [k] before [u].

#, V \_\_\_ u, ũ

[kʰʊnrɛŋ]	training
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[kʔ]: Voiceless, mediovelar stop. Unreleased. Syllabic.

V \_\_\_ k

[gakʔko:]	school
-----------	--------

[k̠]: Voiceless, pre-velar stop.

## Environment

## Example

# ___ i, ɪ, j	[kipʔpu]	ticket
V ___ i, ɪ, j	[aki]	autumn
kʔ ___ i, ɪ, j	[θakʔki]	just now
ŋ ___ i, ɪ, j	[ʃiŋki]	new

[k̠]: Voiceless, pre-velar stop. Strongly aspirated. Varies freely with [k̠] in all positions of its occurrence.

<sup>8</sup> [tʃ] and [tʃ] do not occur before [e] even in foreign loan words, e.g. [tʃiʃeɪn] *chain*.

[ɸ]	Voiceless, bilabial fricative		
Environment		Example	
# _____ u		[ɸuŋgome]	loincloth
V _____ u		[sonoɸune]	that ship
[θ]	Voiceless, interdental fricative. Varies freely with s and s.		
# _____ V (-i, ī, j)		[θet <sup>h</sup> ume:]	explanation
V _____ V (-i, ī, j)		[aθa]	flax
θ _____ V		[iθθai]	entirely
n <sub>1</sub> _____ V		[θenθei]	teacher
[θ̄]	Voiceless, interdental fricative. Long.		
V _____ θ̄		[iθ̄θai]	entirely
[s̄]	Voiceless dental fricative. Varies freely with θ and s. <sup>9</sup>		
# _____ e, o, a, ẽ		[s̄ake]	rice wine
		[s̄ɛ̄nt̄fi]	toilet
		[kusa]	grass
[s̄a]	Voiceless, dental fricative. Long		
V _____ s̄		[is̄:soku]	one pair
[ʃ]	Voiceless, prepalatal fricative.		
# _____ i, u, o, a, ī, ũ, ǝ, ǣ		[ʃã̄nto]	properly
		[ʃoʔgat <sup>h</sup> u]	New Year
		[ʃv̄mi]	hobby
V _____ i, u, o, a		[haʃi]	chopsticks
		[oiʃahã̄ŋ]	doctor
		[oʃoʔgat̄u]	New Year
		[kaʃu]	singer

<sup>9</sup> In some morphs [s̄] varies with [h] e.g. [muhumeθã̄ŋ] or [musumesã̄ŋ] *girl*. See 3.2.1.

[f]		
Environment	Example	
n _____ f, u, a <sup>10</sup>	[f̄f̄n̄fi]	gentleman
	[k̄ān̄fa]	thanks
	[θ̄en̄f̄u]	last week
f _____ V (i, e, ɛ)	[īf̄f̄on̄i]	together
[f̄]	Voiceless, prepalatal fricative. Long.	
V _____ f	[īf̄f̄on̄i]	together
[ç]	Voiceless, medio-palatal fricative.	
# _____ i, u, o, a	[ç̄it̄fi]	seven
	[ç̄aku]	one hundred
	[ç̄o:t̄ā]	gourd
	[ç̄u:ç̄u:]	blowing sound
V _____ u	[ç̄u:ç̄u:]	blowing sound
n _____ i	[ç̄iŋç̄iθ̄u]	bedroom
[x]	Voiceless, medio-velar fricative. Varies freely with [h]	
# _____ a	[x̄axa]	mother
V _____ a	[x̄axa]	mother
[h]	Voiceless, glottal fricative. Varies freely with [x] in _____ a and varies with [s] [s] or [θ] in same morphemes.	
# _____ V (-i, f)	[h̄aha]	mother
	[ho:ho:]	method
V _____ V (-i, f)	[arim̄ahu]	there is
n _____ V (-i, f)	[san̄n̄h̄h̄]	three and a half years
[b]	Voiced, bilabial stop	

<sup>10</sup> Only these vowels actually occurred in the material. This environment probably should include all oral and nasal vowels except [e] and [ɛ].

[b]			
Environment		Example	
# _____ V (-i, ɪ)		[babəɟii]	dazzling
		[bãŋ]	night
		[bera]	tongue
V _____ V (-i, ɪ)		[zibũŋ]	oneself
		[oba:jãŋ]	grandmother
		[tuboθa]	scoop net
		[çibo]	string
m _____ V (-i, ɪ)		[tumbo]	deaf
[b]	Voiced, bilabial stop.	Palatalized.	
# _____ i, ɪ, j		[bitʰt̪o]	a little
		[biŋ]	bottle
V _____ V (-i, ɪ, j)		[ibi]	finger
m _____ V (-i, ɪ, j)		[sambʰjaku]	three hundred
		[ombiki]	bullfrog
[d̪]	Voiced, dental stop.	Varies freely with [d] and also with	
[d̪ʰ]	[dʒ]	and [dz] before [u]	
# _____ e, o, a		[deru]	to emerge
		[doa]	door
		[daja]	stable
[d̪ʰ]	Voiced dental stop.	Aspirated. Varies freely with [dʒ] and [dz].	
# _____ u		[d̪ʰuku]	to become angry
n _____ u		[kãnd̪ʰune]	tinned
[d]	Voiced, alveolar stop.	Varies freely with [d̪]	
# _____ e, o, a		[deru]	to emerge
		[doa]	door
		[daja]	stable

[d]			
Environment		Example	
u _____ a		[sãndãŋ]	third grade
[d <sup>z</sup> ]	Voiced alveolar affricate. Weak friction.		
	Varies freely with [d <sup>h</sup> ] and [dz]		
# _____ u		[d <sup>z</sup> uku]	to become angry
n _____ u		[kãnd <sup>z</sup> ume]	tinned
[dz]	Voiced alveolar affricate. Strong friction.		
	Varies freely with [d <sup>h</sup> ] and [d <sup>z</sup> ].		
# _____ u		[dzuku]	to become angry
n _____ u		[kãndzume]	tinned
[n <sub>ɔ̃</sub> d] <sup>11</sup>	Voiced, alveolar stop. Prenasalized.		
~ _____ V (-i, i, u, ũ)		[õ <sup>n</sup> doru]	to dance
		[ç <sup>n</sup> dari]	left
[n <sub>ɔ̃</sub> d <sup>h</sup> ]	Voiced dental stop. Prenasalized. Strongly aspirated.		
	Varies freely with [n <sub>ɔ̃</sub> d <sup>z</sup> ] and [n <sup>n</sup> dz].		
~ _____ u, ũ		[inã <sup>n</sup> d <sup>h</sup> uma]	lightning
		[m <sup>n</sup> d <sup>h</sup> u]	water
[n <sub>ɔ̃</sub> d <sup>z</sup> ]	Voiced alveolar affricate. Prenasalized. Weak affrication.		
	Varies with [n <sub>ɔ̃</sub> d <sup>h</sup> ] and [n <sup>n</sup> dz].		
~ _____ u, ũ		[inã <sup>n</sup> d <sup>z</sup> uma]	lightning
		[m <sup>n</sup> d <sup>z</sup> u]	water

<sup>11</sup> The degree of prenasalization seems to depend somewhat on morphological factors, being weaker across morpheme boundaries than it is within a single morpheme. See Hattori Shirō "On 'inron kara mita Kokugo no Akusento," (音韻論から見た国語のアクセント) (A Phonemic view of the Japanese Accent), *Kokugo Kenkyū*, (Studies in the National Language) No. 2, 1954, p.264.

[<sup>n</sup>dz] Voiced alveolar affricate. Prenasalized. Strong affrication.  
Varies freely with [<sup>n</sup>d<sup>h</sup>] and [<sup>n</sup>dʒ].

Environment	Example	
$\tilde{V}$ _____ u, ũ	[ <u>ɸi<sup>n</sup>dzuma</u> ]	lightning
	[ <u>mɪ<sup>n</sup>dzu</u> ]	water
[dʒ] <sup>12</sup> Voiced prepalatal affricate.		
# _____ i, u, a	[dʒi]	character
	[dʒu:mɪŋ]	resident
n _____ i, u, a	[dʒa]	is
	[kã <sup>n</sup> dʒi]	Chinese character
[ <sup>n</sup> dʒ] Voiced prepalatal affricate. Prenasalized.		
$\tilde{V}$ _____ i, u	[ <u>ɸi<sup>n</sup>dʒi</u> ]	elbow
	[gõ <sup>n</sup> dʒu:ɲo:]	five-tiered pagoda
[g] Voiced, mediovelar stop.		
# _____ u, e, o, a	[guʒi]	argument
	[gẽŋkãŋ]	entrance hall
	[gõdemuɸi]	cockroach
	[gaiʒiŋ]	foreigner
ŋ _____ V (-i, i, j)	[ <u>ɸũŋgome</u> ]	loincloth
	[ <u>ɸiŋgo:</u> ]	signal
[ <sup>n</sup> g] Voiced, mediovelar stop. Prenasalized.		
$\tilde{V}$ _____ V (-i, i, j)	[ <u>ɸũ:<sup>n</sup>go</u> ]	fifteen
	[ <u>ũiŋgeta</u> ]	fled

12. In the Sakawa material there were very few examples of [dʒ] or [<sup>n</sup>dʒ] occurring before vowels other than [i]. Often what appeared to be [dʒ] turned out on subsequent repetitions to be [ʒ]. There seems to be some overlap with [dʒ] as an uncommon variant of [ʒ] in some morphs. There is a tendency to avoid [dʒ] before or after a back vowel. See Doi Shigetoshi, *Tosa Kotoba* (Tosa Speech), Kōchi (1958), p.41.

[g] Voiced, prevelar stop.

Environment	Example	
# _____ i, i', j	[gɪŋko:]	bank
	[gju:]	beef
n _____ i, i', j	[girɪŋgiri]	barely
	[sãŋgjo:]	industry

[ŋg] Voiced, prevelar stop. Prenasalized.

V _____ i, i', j	[tɔŋgi]	friend
------------------	---------	--------

[ð] Voiced, interdental fricative. Varies freely with [z].

# _____ u, e, o, a, ũ, ẽ, õ, ǣ	[ðãmbu]	all
	[ðo:ri]	sandals
V _____ V (-i, i', j)	[goðemu/i]	cockroach

V _____ V (-i, i', j)	[ikaðat'ʔta]	did not go
-----------------------	--------------	------------

n _____ V (-i, i', j)	[kãðõẽŋ]	complete
-----------------------	----------	----------

[z] Voiced, dental or alveolar fricative. Varies freely with [ð].

# _____ V (-i, i', j)	[zẽmbu]	all
	[zo:ri]	sandals
V _____ V (-i, i', j)	[kaze]	wind
n _____ V (-i, i', j)	[kãnzẽŋ]	complete
	[ãnzɛru]	to worry

[ʒ] Voiced, prepalatal fricative.

# _____ i, u, o, a	[ʒibũŋ]	oneself
	[ʒũ:ŋgo:]	fifteen
	[ʒo:ðu]	skilful
	[ʒari]	gravel



Environment		Example
V ____ V (-e)	[sāzi]	spoon
	[dāzare]	pun
n ____ V (-e, ɛ)	[tɛ̄n̄z̄o:]	ceiling
	[n̄īn̄za]	feudal spy
[r]	Voiced, alveolar flap.	
# ____ V (-i, ī, j)	[rak̄ʔkasei]	peanut
	[reihoku]	area of northern Kochi
	[roku]	six
	[ruθu]	absence
V ____ V (-i, ī, j)	[karaθu]	crow
n ____ V (-i, ī, j)	[k̄θ̄m̄r̄ɛ̄ŋ]	training
[r]	Voiced, alveolar flap. Palatalized.	
# ____ i, ī, j	[p̄jowaki]	both sides
# ____ i, ī, j	[rip̄ʔpa]	splendid
V ____ i, ī, j	[p̄iripiri]	hot (of taste)
	[xat̄ʔt̄ɛ̄nr̄joku]	possibilities
n ____ i, ī, j	[s̄ān̄ri]	three li
[m]	Voiced, bilabial nasal stop.	
# ____ V (-i, ī, j)	[muko]	bridegroom
	[me:]	niece
	[m̄ōntek̄çita]	came back
	[ma:ri]	circumference
V ____ V (-i, ī, j)	[k̄ūmo]	cloud
	[hakama]	divided skirt
m ____ V (-i, ī, j)	[θ̄āma]	pike (fish)
	[māmai]	delicious

Environment		Example
[m]	Voiced, bilabial stop. Palatalized.	
# <u>    </u> i, ī, j	[m̄imi]	ear
	[mjō:b̄ãŋ]	tomorrow night
V <u>    </u> i, ī, j	[m̄imi]	ear
	[k̄amjo:kau]	to buy paper
[m̄]	Voiced, bilabial nasal stop. Syllabic.	
# <u>    </u> m	[m̄mai]	delicious
V <u>    </u> m, p, b	[θ̄ẽmpaikaku]	senior boys
	[nã̄mbo]	how much
	[θ̄ã̄mma]	pike (fish)
[m̄]	Voiced, bilabial nasal stop. Palatalized. Syllabic.	
V <u>    </u> p	[p̄j̄õmp̄j̄õŋ]	jumping (onomatopoeia)
[n]	Voiced, alveolar, nasal stop.	
# <u>    </u> V (-i, ī, j)	[nã̄mbo]	how much
V <u>    </u> V	[rain̄ẽŋ]	next year
	[k̄çino:]	yesterday
n̄ <u>    </u> V	[mã̄nnaka]	middle
~ V <u>    </u> d	[af̄nda] <sup>13</sup>	between
[n̄]	Voiced, alveolar nasal stop. Palatalized.	
# <u>    </u> i, ī, j	[n̄iŋge]	person
	[nju:ŋgaku]	entering school
V <u>    </u> i, ī, j	[ḡju:n̄jũ]	milk
n̄ <u>    </u> i, ī, j	[k̄ȭm̄jaku]	devil's tongue

<sup>13</sup> This is a deliberate or slow pronunciation of [af̄nda]. The sequence of segments [nd] varies freely with [n̄d]; [n̄d] is treated above as a unit segment.

[ŋ] Voiced, alveolar, nasal stop. Syllabic.

Environment

Example

V \_\_\_\_\_ t, d, d<sup>h</sup>, d<sup>z</sup>, dz, θ, ð, s, z, r, n

[kãntãŋ]	simple
[sãndãŋ]	third grade
[kãndã <sup>h</sup> ume]	tinned
[θẽŋθei]	teacher
[kãndõẽŋ]	complete
[kãnsai]	the Kansai
[kõũnrẽŋ]	training
[sãnnenŋ]	three years

[ŋ̃] Voiced, alveolar, nasal stop. Palatalized. Syllabic.

V \_\_\_\_\_ tɸ, tɸ, ɸ, ɸ, ɸ, x, n,

[sẽntɸi]	toilet
[kĩneŋçi]	monument
[tẽŋzõ:]	ceiling
[kãŋfa]	thanks
[kãŋrinĩŋ]	manager
[sẽmĩŋ]	one thousand (people)

[ŋ]<sup>14</sup> Voiced, postvelar, nasal stop. Syllabic.

V \_\_\_\_\_ #, j, w, i, e, a, o, u, #

[sãŋjẽŋ] <sup>15</sup>	three yen
[kõŋja]	tonight
[dẽŋwa]	telephone

<sup>14</sup> In rapid speech this segment is often replaced by a prolongation and strong nasalization of the preceding vowel [u<sup>w</sup>ẽndaθãã] for [u<sup>w</sup>ẽndaθãŋ]. *Mr. Ueda.*

<sup>15</sup> A short glide onset to the vowel following [ŋ] is usually heard. The glide is the high front non-syllabic vowel [j] except before [o] where the back glide [w] is heard. Here [ŋ̃] is a less common free variant of [ŋ].

[ŋ]

Environment

Example

V _____ #j,w,f,ɛ,ã,õ,ũ,#	[rɛŋ <sup>16</sup> ai]	love
	[hõŋ <sup>w</sup> õjomiju:]	is reading a book
	[wakarãŋ]	not understand

[ŋ] Voiced, mediovelar, nasal stop.

V _____ g <sup>16</sup>	[mãŋgo]	grandchild
-------------------------	---------	------------

[ŋ̃] Voiced, prevelar, nasal stop.

V _____ g	[tõŋgi]	friend
-----------	---------	--------

[ŋ] Voiced, mediovelar nasal stop. Syllabic.

V _____ k,g,	[ʃfɪŋgo:]	signal
	[sɛ̃ŋkaku]	triangle

V _____ V,#	Varies freely with [n]	[rɛŋai]	love
		[wakarãŋ]	not understand

The non-syllabic vowels

[j] The non-syllabic front vowel

# _____ u,o,a,ũ,õ,ã,	[jama]	mountain
	[joki]	axe
	[ju:nomi]	teacup
	[jo: <sup>n</sup> da]	read
V _____ u,o,a,ũ,õ,ã,	[kuiju:]	is eating
	[ɸuju]	winter
	[kajaru]	to fall over
p,b,k,g,ŋg,m,n,r,ŋ _____ u,o,a,ũ,õ,ã	[pjõmpjõŋ]	jumping (onomat.)
	[okjakuŋã]	guest
	[gju:]	beef

<sup>16</sup> This is a rare free variant of [ŋ<sup>n</sup>g] treated above as a unit segment, [ŋ] occurs in a few places in the texts presumably as a rapid speech variant of [ŋ<sup>n</sup>g]. This segment is appreciably shorter than [ŋ] in [ʃfɪŋgo:] *signal*.

[j]

Environment	Example	
$p, b, k, g, \eta g, m, n, r, \eta, \eta$ _____ $u, o, a, \bar{u}, \bar{o}, \bar{a}$	[ <u>mimjo</u> ]	ear (as object)
	[ <u>rjowaki</u> ]	both sides
	[ <u>kinjo:bi</u> ]	Friday

A [j] glide often occurs between [ŋ] or [ŋ] and a following vowel other than the mid back vowel.

[ <u>sap<sup>h</sup>ŋ</u> ]	three yen
[ <u>zen<sup>h</sup>iŋ</u> ]	all members

[w] The non-syllabic back vowel.

#, V _____ $a, o$	[ <u>ware</u> ]	you
	[ <u>rjowaki</u> ]	both sides
	[ <u>uwo</u> ]	fish

A [w] glide occurs between [ŋ] (or [ŋ]) and a following mid back vowel.

[hōnwojomiju:] is reading a book

### 3.1.2. The Vowel Segments.

In this section no attempt is made to give examples for all possible vowel environments. Rather the emphasis is placed on the limitation of vowel occurrence after certain consonant segments. The environments for higher pitch and lower pitch vowels are not listed separately. The material collected for Sakawa does not suggest that tone has any effect on vowel distribution.

[i] The high front vowel.

# _____ C (except $g, \eta g, g, \eta g, \bar{d}, \bar{d}^Z, \bar{d}^Z, \bar{d}_2, \bar{d}_2^Z, \bar{d}_2^Z, \bar{d}_2^Z, \bar{d}^n, \bar{d}^h, m, \bar{m}, n, \bar{n}, \eta, \bar{\eta}, n, )$	[ <u>irin<sup>h</sup>gub<sup>h</sup>ci</u> ]	entrance
	[ <u>i<sup>h</sup>u<sup>h</sup>hu</u> ]	five
	[ <u>imo:to</u> ]	younger sister

[i]

Environment

Example

$p, b, t_s, t_f, f, s, z, d_z, {}^n d_z, k, g, {}^n g, m, n, r$  \_\_\_\_\_ C (as above)

[ki<sub>z</sub>ŋ̄] standard

[sitʔtʃu:] (I) know

[kŋ̄gi] nail

[ʔu<sub>z</sub>i<sub>s</sub>ãŋ̄] Mt. Fuji

[ʔŋ̄<sup>n</sup>d<sub>z</sub>inohana] wisteria

[ibiwa] ring

v<sup>17</sup> \_\_\_\_\_ C (as above)

[kuimōŋ̄] food

[tei<sub>f</sub>u] husband

[oi] nephew

[dajku] carpenter

[t<sub>x</sub><sup>h</sup>urui] well

C \_\_\_\_\_ v<sup>18</sup>

[osieha<sub>z</sub>imeta] started to teach

[tsieĩŋ̄] chain

[i] High front vowel. Nasalized.

#,  $p, b, t_s, t_f, f, s, z, d_z, {}^n d_z, k, g, {}^n g, m, n, r$  \_\_\_\_\_  ${}^n g, {}^n g, {}^n d, {}^n d^h, {}^n d^z, {}^n d^z, {}^n \eta, {}^n \eta, {}^n \eta, {}^n \eta, {}^n m, {}^n m, {}^n r$

[ĩŋ̄ki] ink

[pĩŋ̄] pin

[irĩŋ̄gutçi] entrance

[mĩŋ̄<sup>n</sup>hu] water

[d<sub>x</sub><sup>h</sup>ukĩŋ̄] hood

17. Vowel sequences do not occur across morpheme boundaries. A glottal constriction onset [ʔ] (See 3.2.4.) accompanies the articulation of the second morpheme [ʔutoi'asi] *fat legs*, [loki'ederu] *to go offshore*.

18. Only two examples of iV occur in the text. Usually the second vowel has a high non-syllabic onset. e.g. [sijo] *salt* [je] *house*. [osieha<sub>z</sub>imeru] and [tsieĩŋ̄] are perhaps [osieha<sub>z</sub>imeru] and [tsieĩŋ̄].

[i]

Environment

Example

n,ŋ \_\_\_\_\_ V, (C), #

[hãŋi]

extent

[rẽŋãi]

love

[zẽŋfi]

all members

[i:]<sup>19</sup> Long high front vowel.

C (as for [i]) \_\_\_\_\_ #

[o:ki:]<sup>20</sup>

large

[çi:]

fire

[ut<sup>h</sup>ukuʃi:]

beautiful

C (as for [i]) \_\_\_\_\_ (C)

[odʒi:jãn]

grandfather

[u] High back vowel.

[p,b,t<sup>h</sup>,t<sup>s</sup>,ts,tʃ,d,d<sup>h</sup>,d<sup>z</sup>,dz,<sup>n</sup>d,<sup>n</sup>d<sup>h</sup>,<sup>n</sup>d<sup>z</sup>,<sup>n</sup>dz,k,kɸ,θ,ð,s,z,ʃ,ʒ, dʒ,<sup>n</sup>dʒ,

ɸ, m, n, ŋ, r, j, #]

\_\_\_\_\_ C (except g, ŋg, g, ŋg, d, d, d<sup>h</sup>,d<sup>z</sup>, dz, <sup>n</sup>d, <sup>n</sup>d<sup>h</sup>, <sup>n</sup>d<sup>z</sup>, <sup>n</sup>dz, m, m,

n, n, ŋ, ŋ, r)

[uθu]

mortar

[ɸune]

boat

[t<sup>h</sup>urui]

well

[keburi]

smoke

C (as above) \_\_\_\_\_ v

[t<sup>h</sup>urui]

well

[tue]

staff

<sup>19</sup> In 3.1.2. long vowels are not treated as separate environments, but are included under the corresponding short vowel.

<sup>20</sup> The more common dialect form is [ɸutoi] *large, fat*.

[ŭ] High back vowel. Nasalized.

Environment	Example
C (as for [u]) _____ ng, ŋg, n <sub>ɔ</sub> d, n <sub>ɔ</sub> d <sup>h</sup> , n <sub>ɔ</sub> d <sup>z</sup> , n <sub>ɔ</sub> dz, m, m̄, n, n̄, ŋ, ŋ̄	
	[ʒibū̄ŋ] time
	[ɸū̄ŋgome] loincloth
	[ɸū̄ <sup>n</sup> de] writing brush
	[ɸū̄ <sup>n</sup> dʒinohana] wisteria
	[t <sup>h</sup> ū̄mbo] deaf
	[k <sup>ɸ</sup> ū̄nrēn] training

[e]<sup>21</sup> The mid front vowel.

#, p, t, k, θ, s, h, b, d<sup>h</sup>, d, n<sub>ɔ</sub>d, g, ŋg, ʒ,

z, r, m, n, _____ C (except d, d <sup>h</sup> , d <sup>z</sup> , dz, n <sub>ɔ</sub> d, n <sub>ɔ</sub> d <sup>h</sup> , n <sub>ɔ</sub> d <sup>z</sup> , n <sub>ɔ</sub> dz, g, g, ŋg, m̄, m̄̄, n̄, n̄̄, ŋ̄, ŋ̄̄)	
	[ekçi] station
	[θake] sake
	[ānzeru] to worry
C (as above) _____ V	[θē̄ŋθei] teacher
V _____ #, C (as above)	[koē] voice
	[t <sup>h</sup> uē] staff
	[ofieru] to teach

[ɛ̄] The mid front vowel. Nasalized.

#, C (as for [e]) _____ n <sub>ɔ</sub> d, n <sub>ɔ</sub> d <sup>h</sup> , n <sub>ɔ</sub> d <sup>z</sup> , n <sub>ɔ</sub> dz, ŋg, ŋ̄g, m̄, m̄̄, n̄, n̄̄, ŋ̄, ŋ̄̄	
	[pē̄ŋ] pen
	[ʒē̄mbu] all
	[sent̄si] toilet

21. Relatively few examples of [e] and [ɛ̄] actually occur in the material collected. The environments given here are those theoretically possible (based on comparison with other vowels). Many do not occur in the corpus and some probably do not occur in the Sakawa dialect.



[ɛ]

Environment

Example

[θore <sup>n</sup> de]	then
[korẽ <sup>n</sup> gajoi]	this is good
[sãŋẽŋ]	three yen
[hãŋjẽi]	prosperity

n, ñ \_\_\_\_\_ C, V

[e:] The long mid front vowel.

m, b \_\_\_\_\_ #, C, (as for [e])

[me:]	niece
[be:ojuna]	don't lie
[me:fo]	famous place

[o] The mid back vowel.

#, p, t, t<sup>sk</sup>, θ, s, f, ɕ, h, b, d, d<sup>n</sup>, dz, dz<sup>n</sup>,d<sup>z</sup>, d<sup>z</sup>, g, ŋ, ɔ̃, z, r, m, n, j, w \_\_\_\_\_ #, C (except d, d, d<sup>h</sup>, d<sup>z</sup>, dz, d<sup>n</sup>, d<sup>h</sup>, d<sup>z</sup>,

dz, g, g, ŋ, ŋ, m, m, n, n, n, n)

[obi]	sash
[φũ <sup>n</sup> gome]	loin cloth
[ð <sup>n</sup> goromctɕi]	mole
[jobai]	"night prowler"
[oi/ahãŋ]	doctor
[koẽ]	voice
[koi]	carp

#, C (as above) \_\_\_\_\_ V

[õ] The mid back vowel. Nasalized.

#, C (as for [o]) \_\_\_\_\_ n<sup>d</sup>, n<sup>d</sup>, n<sup>d</sup>, n<sup>d</sup>, dz, ŋ, ŋ, m, m, n, n, n, n, n

[õ <sup>n</sup> doru]	to dance
[gõ <sup>n</sup> gẽŋ]	etymology
[õ <sup>n</sup> biki]	bullfrog
[mõŋ]	gate

[o:] Long mid back vowel.

Environment

Example

#,C (as for [o]) _____ C (as for [o])	[o:ta]	met
	[o:ki:]	large
	[go:tãŋ]	gourd
	[gakʔkb:]	school

[õ:]<sup>22</sup> Long mid back vowel. Nasalized.

#,C (as for [o]) _____ C (as for [õ])	[õ:n̄da]	knitted
	[ofoʔŋgaʔ <sup>h</sup> u]	New Year
	or	
	[ofoʔŋgaʔ <sup>h</sup> u]	

[a] The low vowel.

#,p,t,t,tʃk,θ,s,f,ç,x,h \_\_\_\_\_ #C (as for [o])

b,d,d̄,dz,g,ð,ʒ,r,m,n,j,w,

[aki]	autumn	
[ame]	rain	
[taboko]	tobacco	
[take]	bamboo	
[çaku]	one hundred	
[karaθu]	crow	
[xaxa]	mother	
[jama]	mountain	
#,C (as above) _____ V	[xae]	fly
	[ipʔpai]	full
	[kao] <sup>23</sup>	face
	[kau]	to buy

<sup>22</sup> Nasalization over the whole segment seems to vary with [oʔ].

<sup>23</sup> The more common dialect form is [t̄<sup>h</sup>ura] *face*.

[a]		
Environment	Example	
V _____ #, C (as above)	[çi <sup>h</sup> ai]	cold
	[teate]	treatment
	[doa]	door
[ã]	The low vowel. Nasalized.	
#, C (as above) _____	<sup>n</sup> d, <sup>n</sup> d̥, <sup>n</sup> d <sup>h</sup> , <sup>n</sup> dz, <sup>n</sup> dz̥, <sup>n</sup> g, <sup>n</sup> g̥, <sup>n</sup> m, <sup>n</sup> m̥, <sup>n</sup> ŋ, <sup>n</sup> ŋ̥, <sup>n</sup> ɲ, <sup>n</sup> ɲ̥	
	[umã <sup>n</sup> daja]	stable
	[inã <sup>n</sup> d̥ <sup>h</sup> uma]	lightning
	[mã <sup>n</sup> go]	grandchild
	[sã <sup>n</sup> kaku]	triangle
	[ã <sup>n</sup> zeru]	to worry
	[tã <sup>n</sup> bo]	paddy field
n, ŋ _____ V, C	[rẽ <sup>n</sup> ai]	love

[a:] Long low vowel.

C (as for [a]) \_\_\_\_\_ C (as for [a]) [oba:jã̃] grandmother

Devoicing of vowels which is such a common feature in the standard Tokyo language does not occur very often in the speech of Okazaki, but may be found in rapid conversation and is particularly prominent in the speech of the young. This can probably be ascribed to dialect borrowing. The devoicing of the vowels i and u (it never occurs with the other vowels) may be considered rare positional variants of the voiced vowels. The devoicing of the high vowels occurs before pause and between voiceless consonants. e.g. [d̥eθu]<sup>24</sup> is varies with [deθu],

<sup>24</sup> When a vowel which normally bears high pitch is devoiced the high pitch is transferred to the preceding vowel.

[sukofɪ] a little varies with [sukofɪ].

3.1.3. The seventy - six segments of the Sakawa dialect are summarized in the following chart. It is a composite of segments used by all speakers of the Sakawa dialect. Probably no speaker of the dialect employs all of the segments. The affricates are almost certainly confined to speakers under thirty years of age. The affricated stops are most often heard in middle-aged informants and aspirated stops in speakers over sixty. The Sakawa dialect is at present undergoing phonetic changes due to the influence of the Tokyo standard language and the speech of the Ōsaka area. It is really not a single dialect, but a mixture of several.

Point of Articulation	Mode of Articulation										
	Labial	Labial Palatalized	Inter Dental	Dental	Alveolar	Alveolar Palatalized	Prepalatal	Prevelar (front)	Mediovelar (back)	Postvelar	Glottal
Stops Voiceless	p	p̟		t	t			k	k		
Voiced	b	b̟		d	d			g	g		
Prenasal				n	n			ŋ	ŋ		
Aspirated Stops											
Voiceless				tʰ	tʰ						
Voiced				dʰ	dʰ						
Prenasal				nʰ	nʰ						
Affricated Stops											
Voiceless					tʰs						
Voiced					dʰz						
Prenasal					nʰz						
Unreleased Stops	pʔ				tʔ			kʔ	kʔ		
Affricates Voiceless					ts		tʃ	tʃ			
Voiced					dz		dʒ	dʒ			
Prenasal					nʰdz		nʰdʒ	nʰdʒ			
Fricatives Voiceless	ɸ		θ	s	s		f	ç	x		h
Voiced					z						
Long			θː	sː	sː		fː				
Flaps					r	r					
Nasal Stops	m	m̟			n	n̟					
Syllabic Nasal Stops	ɱ	ɱ̟			ɳ	ɳ̟		ɲ	ɲ̟	ŋ	
Non-syllabic Vowels								j	w		
High-vowels Oral								i	u		
Nasal								ĩ	ũ		
Long								i:	u:		
Mid-vowels Oral								e	o		
Nasal								ẽ	õ		
Long								e:	o:		
Low-vowels Oral								a			
Nasal								ã			
Long								a:			

The Segments of the Sakawa Dialect.

The long nasalized vowels, and the pause phoneme #, are not included in the chart.

### 3.2. The Phonemes

#### 3.2.0 Grouping of Segments into Phonemes

The segments of the Sakawa dialect are grouped together on the basis of the rule that <sup>25</sup>"no two segments included in one phoneme ever occur in the same environment unless they vary freely (in repetitions of an utterance)<sup>26</sup> in that environment." Segments in complementary distribution, however, should only be assigned to a single phoneme if they share features of phonetic similarity not found in any of the members of another phoneme.<sup>27</sup>

The aim of the phonemic analysis is to reduce the number of phonemes as far as possible, at the same time ensuring that the phonemes have the widest possible distribution. In Sakawa many of the segments occurring in free variation can be included into a single phoneme by following the procedure suggested by Harris.<sup>28</sup> Apart from this free variation which is largely the product of contact with other dialects, the segments of Sakawa are assigned to phonemes on the grounds of contrast, complementary distribution, patterning and rephonemicization.

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25 Harris *op.cit.* p.110

26 Here taken to include repetitions by any speaker of the same dialect.

27 Harris *op.cit.* p.64 Bloch, *Language* 26.111.

28 "If two segments vary freely in one environment, and only one appears in another environment, they are grouped in one phoneme, so long as the difference between the two environments is stateable in terms of the other segments (not in terms of morphemes)." *Ibid.* p.110.

## 3.2.1. Complementary Distribution

A number of the segments occurring before u,e,o and a and the segments occurring before the high vowels, syllabic and non-syllabic, form sets of phonemes with similar positional variants.<sup>29</sup>

p,	p	→	/p/
pʔ,	pʔ	→	/pʔ/
k,	k	→	/k/
kʔ,	kʔ	→	/kʔ/
g,	g	→	/g/
ŋg,	ŋg	→	/ŋg/
r,	r	→	/r/
m,	m	→	/m/
n,	n	→	/n/
ɱ,	ɱ	→	/ɱ/
ɳ,	ɳ	→	/ɳ/
ɲ,	ɲ	→	/ɲ/

The aspirated stops which occur only before [u] are in complementary distribution with the corresponding unaspirated (or weakly aspirated) stops and may be included into single phonemes.

t̚,	t̚ <sup>h</sup>	→	/t̚/
ɖ̚,	ɖ̚ <sup>h</sup>	→	/ɖ̚/

The prenasalized segments are in complementary distribution with their corresponding voiced apical (dental and alveolar) and dorsal (prevelar and mediovelar) stops.

<sup>29</sup> Harris *op.cit.* p.111.

d,	n <sub>d</sub>	→	/d/
<u>d</u> ,	n <sub><u>d</u></sub>	→	/ <u>d</u> /
g,	n <sub>g</sub>	→	/g/
dz,	n <sub>dz</sub>	→	/dz/
<u>dz</u> ,	n <sub><u>dz</u></sub>	→	/ <u>dz</u> /
d <sub>z</sub> ,	n <sub>d<sub>z</sub></sub>	→	/d <sub>z</sub> /

Of the tentative phonemes set up in this operation /d/ and /d/; /dz/ and /dz/ occur in free variation. The phonemes can now be reduced to /d/ and /dz/. /d/ and /dz/ however, occur in complementary distribution, leaving a single phoneme /d/.

The phoneme /d/ now encompasses the segments [d], [d], [d<sup>h</sup>] [n<sub>d</sub>], [n<sub>d</sub>], [n<sub>d<sup>h</sup></sub>], [dz], [dz], [n<sub>dz</sub>], [n<sub>dz</sub>].

/d/ contrasts with /g/ and /d<sub>z</sub>/. [t<sup>s</sup>], the free variant of [t<sup>h</sup>] is included with [t<sup>h</sup>] into /t<sub>z</sub>/. As /t<sub>z</sub>/ and /t/ occur in free variation both can be included in a single phoneme /t/. The phoneme /t/ now contains the segments [t], [t<sub>z</sub>], [t<sup>h</sup>], [t<sup>s</sup>], [ts].

The free variants [t<sub>ç</sub>] and [t<sub>f</sub>] are tentatively included into /t<sub>f</sub>/. Similarly [ʃ], [s<sub>z</sub>] and [s] occurring in free variation fall together into a single phoneme /s/. [ʒ] and [z] are combined in /z/. [ɲ] and [ɳ] occurring in free variation in V\_\_V, # and in complementary distribution before C fall together into /ɳ/.

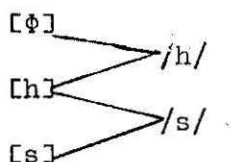
[ɸ], [ç] and [x] and [h] occur in overlapping distribution. [ɸ] appears only in the environment \_\_\_\_u, [x] only in \_\_\_\_a, and only [ç] occurs before i. As [x] and [h] vary freely they may be included in a single phoneme /h/. As the members of /h/ contrast



with [ç] in the environment \_\_\_\_\_u,o,a, [ç] must be included for the moment in a separate phoneme /ç/. The problem, then is the assignment of the phoneme [ϕ]. In the speech of Okazaki [ϕ] seems to contrast with [h].

[ϕ̄ūŋgu]	globefish
[h̄ūŋgu]	immediately

Although [ϕ] varies freely with [h] in the sense of *globefish*, [ϕ] never occurs in [h̄ūŋgu] in the sense of *immediately*. [h̄ūŋgu] *immediately*, however, varies freely with forms of the same meaning which have [s] or [θ] (i.e./s/) instead of [h]. [θ̄ūŋgu] *immediately*, [s̄ūŋgu] *immediately*. As there is no descriptive test to indicate whether [h] should be assigned to /s/ or /h/, strictly speaking [ϕ] and [h] should be assigned to different phonemes. As [h] is a rare free variant of [ϕ] however, to recognise ϕ as a phoneme with a very limited distribution would increase the phoneme inventory unnecessarily. [h] in the environment \_\_\_\_\_u is a member of /s/. ϕ is a member of /h/.



If [ϕ] is to be included in /h/ the distinctive features of this phoneme should be such that they encompass segments [ϕ] [x] and [h]. As the segments differ greatly in their point of articulation a description must be found which embraces the disjunctive qualities labial, mediovelar and glottal.<sup>30</sup> Bloch suggests the term non-lingual.<sup>31</sup>

<sup>30</sup> The recognition of disjunctive qualities in phonemic analysis is discussed in Bloch, *op.cit.* p.107

<sup>31</sup> *Ibid.*

A problem arises in designating /h/ the voiceless, non-lingual, fricatives as the phoneme /ç/ also shares these qualities. Fortunately this problem is overcome by the operation described in 3.2.5.

The nasal vowels, occurring only before prenasalized stops and before or after syllabic nasals are in complementary distribution with the oral vowels. Long vowels and vowel sequences are treated in 3.2.4.

[i]	[ɨ]	→	/i/
[u]	[ɯ]	→	/u/
[e]	[ɛ]	→	/e/
[o]	[ɔ]	→	/o/
[a]	[ä]	→	/a/

The unreleased stops and long fricatives occur in complementary distribution with each other and with the corresponding released stops and short fricative. They could therefore be incorporated into the same phonemes as the released segments but this would give these phonemes a distribution different from the other phonemes. They are assigned to another phoneme on the basis of patterning as described in 3.2.2. Phonemes set up through the elimination of free variants and segments in complementary distribution are:-

/p/ /t/ /k/ /pʔ/ /tʔ/ /kʔ/ /tʃ/ /s/ /ʃ/ /ç/ /h/  
 /b/ /d/ /g/ /d̥/ /z/ /ʒ/ /r/ /m/ /n/ /m̥/ /n̥/ /ŋ̥/  
 /j/ /w/ /i/ /u/ /e/ /o/ /a/

### 3.2.2. The unreleased segments

When setting up phonemes it is desirable that each phoneme be given the widest distribution possible and that voiceless phonemes occur in the same environments as their voiced counterparts. The unreleased stops differ from all other stops in having no voiced equivalents. At the same

time the unreleased stops differ from all other stops in that they occur only before a consonant.

The distribution of the long fricatives is the same as that of the unreleased stops. The long fricatives have no voiced equivalents and are limited to occurrence before consonants.

As the unreleased stops and the long fricatives occur in complementary distribution all can be included into a single phoneme. The choice of one of the phonemes already postulated to represent the unreleased stops and the long fricatives would be purely arbitrary and would not indicate phonetic similarity of the segments it comprises. If the voiceless stops and long fricatives are to be incorporated into a single phoneme, clearly a new phoneme must be introduced into the inventory. The difficulty lies in finding a point of similarity shared by all members of the new phoneme, yet not found in the members of the other phonemes. To follow the usual Japanese interpretation this phoneme is indicated by the symbol /q/. Its distinctive features are length and voicelessness. Length as a prolongation of sound can really only occur in continuants. The length of stops is realized phonetically as an unreleased stop segment, followed by a homorganic released stop segment. There is no objection then in designating the phonetically unreleased stop segments as phonemically long. /q/ now becomes the class of long, voiceless, obstruents. The new phoneme and its members with their environments appear below.

/q/	p <sup>?</sup> in ___p
	t <sup>?</sup> in ___t, ___tʃ
	k <sup>?</sup> in ___k
	s <sup>·</sup> in ___s
	f <sup>·</sup> in ___f

The establishment of /q/ gives the remaining phonemes a more regular distribution.

### 3.2.3. The Syllabic Nasals.

The syllabic nasal segments were grouped into three tentative phonemes /m̥/ /n̥/ and /ŋ̥/ on the grounds of complementary distribution. /m̥/ which occurs only before labial consonants is in complementary distribution with the other syllabic nasals and with the corresponding labial nasal stop /m/. It could, therefore, be included in the phoneme /m/. This solution, however, is not possible with /ŋ̥/ which occurs in both \_\_\_C and V\_\_\_V, j and hence contrasts with both /n̥/ and /g/ ([ŋg]). /ŋ̥/ could be assigned to the alveolar nasal phoneme /n̥/, but as this would leave the syllabic /ŋ̥/ with a unique distribution and mean that /m̥/ (with m̥ included) and /n̥/ (with n̥ included) occur in environments in which no other phonemes appear.

/m̥/ would occur in #, V\_\_\_V, V\_\_\_m, p, b, j.

/n̥/ would occur in #, V\_\_\_V, V\_\_\_n, t, d.

To give the nasal stops the same distribution as the other consonant phonemes the syllabic nasals are not included with their non-syllabic counterparts, but are collected into a single phoneme /N̥/ with the distinctive features nasal and syllabic. The distribution of /N̥/ resembles the long obstruent /q/ in that it occurs in \_\_\_C but differs from /q/ in also occurring in V\_\_\_V. /q/ and /N̥/ are in contrasting distribution.

### 3.2.4. Vowel sequences

The phonetically long vowels are best regarded as phonemic geminate vowel sequences [i:] → /ii/, [u:] → /uu/, [e:] → /ee/, [o:] → /oo/, [a:] → /aa/. Although there is no rearticulation of the second vowel in

a phonetically long sequence, as the duration of a long vowel is twice that of a short vowel it is regarded as being two short vowels in succession. In some morphemes, and especially at morpheme boundaries, there is a perceptible break in the articulation of the long vowel. The /aa/ in /obaajaN/ [ōba:jāN] *grandmother* is different from the /aa/ in /akaaka/ [aka?aka] *bright red*. While the former is a simple continuation of the vowel the latter has a slight break followed by rearticulation of the second vowel. With sequences of dissimilar vowels [ei] [ai] and [oi] tend to be pronounced without interruption yet without fusion and having the same length as two short vowels. Other vowel sequences, such as /oe/ /ui/ /ue/ tend to be pronounced with a distinct break between them followed by rearticulation of the second vowel [o'e], [u'i] etc. or a linking of the vowels with a slight non-syllabic glide sound [o<sup>w</sup>e], [u<sup>w</sup>i] etc. Hattori Shirō, in his analysis of standard Japanese<sup>32</sup> states that the second member of a vowel sequence, except in the case of the long vowels, is preceded by a glottal constriction which accompanies the rearticulation of the second vowel. This phoneme, represented as /'/, also indicates the restriction which allows for the build up of air adjunct to the production of a vowel from silence. According to Hattori, then, vowels in the Tokyo dialect do not occur directly after # but are preceded by /'/. This means that except with long vowels all phonetic vowel sequences are reinterpreted as CVCV. [āoi] /'a'o'i/ *blue* (Tokyo dialect). It is proposed here to apply Hattori's analysis to the dialect of Sakawa,

32 Hattori Shirō, "Nihongo no On'in" (Japanese Phonology) in *Gengogaku no Hōhō* (Linguistic Method). Tokyo, (1920) p.360.

with the exception that in the Sakawa material VV sequences are recognised not only in geminate vowels, but also in sequences of dissimilar vowels e.t. /'a'oi/ [a'oi] *blue* (Sakawa dialect).

### 3.2.5. Rephonemicization

By the process of rephonemicization as described by Harris, phonemes with limited distribution are reassigned to other phonemes less restricted in occurrence. Of the tentative phonemes set up in 3.2.1. /t/, /d/, /tʃ/, /dʒ/, /s/, /z/, /ʃ/, /ʒ/, /ç/, /h/ differ from other short segments in that they do not occur before /j/. The tentative phonemes and their limitation on occurrence before vowels is shown in the following diagram.

		tʃi	dʒi			ʃi	i	çi:	
tu	du	tʃu	dʒu	su	zu	ʃu	u	çu:	hu
te	de			se	ze				he
ta	ta	tʃa	dʒa	sa	za	ʃa	a	ça:	ha
to	do	tʃo	dʒo	so	zo	ʃo	o	ço:	ho

It can be seen that /tʃ/, /dʒ/, /ʃ/, /ʒ/, and /ç/ have identical distributions in partial complementary distribution with /t/, /d/, /s/, /z/, and /h/. Only the former occur before /i/, only the latter before /e/. It is possible, then to reassign the phoneme sequences /tʃi/, /dʒi/, /ʃi/, /ʒi/, /çi/ to /ti/, /di/, /si/, /zi/, /hi/. This broadens the distribution of the stops and fricatives so that they now occur before all vowels. /tʃ/, /dʒ/, /ʃ/, /ʒ/ and /ç/ however are now restricted to occurrence before /u/, /o/ and /a/, a restriction found in no other phoneme but /j/. As all other phonemes which occur before /i/ also occur before /j/ and /tʃ/, /dʒ/, /ʃ/, /ʒ/ and /ç/ occur in the same environments as /j/, these five phonemes may be reinterpreted as /tj/, /dj/, /sj/, /zj/ and /hj/.

This reduces the number of phonemes by five and gives the following phonemes a wider and more regular distribution.

ti	di			si	zi		hi
tu	du	tju	dju	su	zu	hju	hu
te	de			se	ze		he
ta	da	tja	dja	sa	za	hja	ha
to	do	tjo	djo	so	zo	hjo	ho

The rephonemicization of /ç/ into /hj/ overcomes the problem encountered in 3.2.1. The distinctive features of /h/ defined as the voiceless non-lingual fricatives now no longer apply to any other phoneme.

If the glottal constriction /ʔ/ set up in 3.2.4. is considered, as it is by Hattori, to be a voiced counterpart of /h/, then all voiceless stops have contrasting voiced counterparts.

### 3.2.6. The phonemic inventory

The seventy-six segments recognized in the Sakawa dialect may be incorporated into twenty-three segmental phonemes:- /p,b,t,d,k,g,s, z,h,ʔ,m,n,r/, the consonants or C; /j,w/ the non-syllabic vowels, or S; /i,u,e,o,a/, the vowels or V; /N/ the syllabic nasals; /q/ the long obstruents. and /#/ the pause phoneme.

The phonemes with their distinctive features, allophones and free variants are given below. Environments are expressed in terms of phonemes.

/#/ Pause

/p/ The voiceless, labial, stops.

[p] in \_\_\_u,o,e,a; [p̥] in \_\_\_i,j;

/b/ The voiced, labial stops.

[b] in \_\_\_u,o,e,a; [b̥] in \_\_\_i,j;

/t/ The voiceless apical/frontal<sup>33</sup> stops.

[t] varies freely with [t̟] in \_\_\_\_\_e,o,a

[t̟<sup>h</sup>] varies freely with [t<sup>s</sup>] and [ts] in \_\_\_\_\_u.

[tʃ] and [tʃ̟] vary freely in \_\_\_\_\_i.

Elsewhere [tʃ] is /tj/

/d/ The voiced apical/frontal stops.

[d] varies freely with [d̟] in #\_\_\_\_\_e,o,a

[d̟<sup>h</sup>] varies freely with [d<sup>z</sup>] and [dz] in #\_\_\_\_\_u

[dʒ] in #\_\_\_\_\_i. In other environments

[dʒ] is /dj/.

[<sup>n</sup>d] varies freely with [<sup>n</sup>d̟] in V\_\_\_\_\_e,o,a

[<sup>n</sup>d̟<sup>h</sup>] varies freely with [<sup>n</sup>d<sup>z</sup>] and [<sup>n</sup>dz] in V\_\_\_\_\_u.

[<sup>n</sup>dʒ] in V\_\_\_\_\_i. [<sup>n</sup>dʒ̟] in V\_\_\_\_\_u,o,a is /dj/

/k/ The voiceless dorsal<sup>34</sup> stops.

[k] in \_\_\_\_\_u,e,o,a; [k̟] varies freely with [k] in \_\_\_\_\_u;

[k] in \_\_\_\_\_i,j, varies freely with [k̟];

/g/ The voiced dorsal stops.

[g] in #\_\_\_\_\_u,e,o,a; [g̟] in #\_\_\_\_\_i,j

[<sup>n</sup>g] in V\_\_\_\_\_u,e,o,a; [<sup>n</sup>g̟] in V\_\_\_\_\_i,j

/s/ The voiceless apical/frontal fricatives.

[s] varies freely with [θ] or [h] in \_\_\_\_\_u,e,o,a

[ʃ] in \_\_\_\_\_i. Elsewhere [ʃ] is /sj/

<sup>33</sup> This term embraces dental, alveolar and palatal segments which occur in the phoneme.

<sup>34</sup> This incorporates the prevelar [k] and mediovelar [k̟].



/z/ The voiced apical/frontal fricatives.

[ð] varies freely with [z] in \_\_\_\_u,e,o,a.

[ʒ] in \_\_\_\_i. Elsewhere [ʒ] is /zj/

/h/ The voiceless non-lingual fricatives.

[χ] in \_\_\_\_e,o,a [x] varies freely with [h] in \_\_\_\_a.

[ϕ] in \_\_\_\_u.

[ç] in \_\_\_\_i. Elsewhere [ç] is /hj/.

/ʔ/ The voiced non-lingual fricative.

No allophones.

/m/ The labial nasals.

[m] in \_\_\_\_u,e,o,a [m] in \_\_\_\_i,j

/n/ The apical nasals.

[n] in \_\_\_\_u,e,o,a [n] in \_\_\_\_i,j

/r/ The apical flap.

[r] in \_\_\_\_u,e,o,a [r] in \_\_\_\_i,j

/j/ The non-syllabic front vowel.

/w/ The non-syllabic back vowel.

/i/ The high front vowels.

[i] in \_\_\_\_d,g,N and N\_\_\_\_; [i] elsewhere

/u/ The high back vowels.

[u] in \_\_\_\_d,g,N and N\_\_\_\_; [u] elsewhere.

/e/ The mid front vowels.

[e] in \_\_\_\_d,g,N and N\_\_\_\_; [e] elsewhere.

/o/ The mid back vowels.

[o] in \_\_\_\_d,g,N and N\_\_\_\_; [o] elsewhere

/a/ The low vowels.

[a] in \_\_\_\_d,g,N and N\_\_\_\_; [a] elsewhere.

/N/ The syllabic nasals.

[m̥] in \_\_\_m,p,b; [ŋ̥] in \_\_\_mi,mj,pi,pj,bi,

[n̥] in \_\_\_n,t,d,; [ɲ̥] in \_\_\_ni,nj,ti,tj,di,dj,

[ŋ̥] in \_\_\_k,g; [ɲ̥] in \_\_\_ki,kj,gi,gj,

[ŋ̥] varies with [ŋ̥] in \_\_\_#, V

/q/ The long voiceless obstruents.

[pʰ] in \_\_\_p; [pʰ] in \_\_\_pi,pj

[tʰ] in \_\_\_t; [tʰ] in \_\_\_t; tj

[kʰ] in \_\_\_k; [kʰ] in \_\_\_ki,kj

[θ] varies freely with [s] in \_\_\_s

[ʃ] in \_\_\_si,sj

### 3.2.7. The Mora

The consonant and vowel segments combine to form morae. The mora is a unit of time equal to the duration of a consonant and a short vowel. The syllabic nasals and the long stops are of one mora duration. Long vowels and sequences of two dissimilar vowels represent two morae. A consonant followed by /j/ and a vowel constitutes a single mora. For this reason Cj sequences could perhaps be regarded as unit phonemes. Of the possible mora types /N/ and /q/ and /V/ (the second member of a phonetically long vowel) occur only as bound forms. The mora types CV and CjV are the minimal freely occurring units in the dialect. [jV] and [wV] sequences are interpreted phonemically as /'jV/ and /'wV/. All morae except /q/ bear a pitch phoneme.

The morae found in the Sakawa dialect are shown in the following chart. Phonemic slashes are omitted.

pi	pu	pe	po	pa	pju	pjo	pja
bi	bu	be	bo	ba	bju	bjo	bjā
ti	tu	te	to	ta	tju	tjo	tja
di	du	de	do	da	dju	djo	dja
ki	ku	ke	ko	ka	kju	kjo	kja
gi	gu	ge	go	ga	gju	gjo	gja
si	su	se	so	sa	sju	sjo	sja
zi	zu	ze	zo	za	zju	zjo	zja
hi	hu	he	ho	ha	hju	hjo	hja
'i	'u	'e	'o	'a	'ju	'jo	'ja
ri	ru	re	ro	ra	rju	rjo	rja
mi	mu	me	mo	ma	mju	mjo	mja
ni	nu	ne	no	na	nju	njo	nja
					'wo	'wa	

N, q, V <sup>35</sup>

All morphemes of the Sakawa dialect can be analysed as combinations of the 109 morae listed above. The mora structure of utterances is reflected in and perhaps reinforced by the 'kana' script in which the mora is the minimal unit.

Not all of the morae listed above occur in the speech of all speakers of the Sakawa dialect. Some, like pja, bja, etc. occur only after q or N, others, like mju, mjo, occur only before V. In young speakers /di, du, dju, djo, dja/ and /zi, zu, zju, zjo, zja/ fall together.

<sup>35</sup> The frequency of occurrence of the phonemes of the Sakawa dialect is not given. Except for differences in the distribution of vowels after t and d the frequencies of occurrence are probably very similar to those of the Tokyo dialect described by Bloch, *op.cit.* p.117.

## 3.3. - 3.4. Pitch

## 3.3.1. The Pitch Phonemes - Intonation

The variations in pitch heard in the Sakawa dialect may be described by setting up four pitch phonemes. These are indicated by the numbers 1,2,3,4, with 1 the lowest and 4 the highest pitch.<sup>36</sup> Pitches 1 and 4 usually occur only before or after #. Each mora carries one of the four pitch phonemes. The four pitch phonemes and their environments are:-

Pitch 1. Very low. Occurs only before and after # or replaces pitch two in very slow and deliberate speech.

Pitch 2. Low. Contrasts with pitch three in distinguishing the lexical meaning of words.

Pitch 3. High. Contrasts with pitch two in distinguishing the lexical meaning of words.

Pitch 4. Very high. Occurs only before # or replaces pitch 3 in rapid, excited speech. Also acts as a morph indicating excitement or emphasis where it replaces all other pitch levels in the pitch accent phrase.

Generally each mora has only one pitch phoneme with the exception that the last mora before # is a morph of intonation which consists of two pitch phonemes. The intonation morphs are:- declarative (21 or 31), interrogative (24 or 34), suspensive (22 or 23) indicated in the transcription by the terminal countours ↓ ↑ →. Some pairs of utterances

differ only in the nature of the final intonation morph, e.g.  $\overset{1}{\#} \overset{3}{a} \overset{2}{m} \overset{31}{g} \overset{2}{a} \overset{31}{q} \overset{1}{u} \overset{31}{r} \overset{1}{u} \overset{31}{\#}$   
 $\overset{1}{i} \overset{3}{t} \overset{2}{r} \overset{234}{a} \overset{1}{i} \overset{3}{n} \overset{2}{s} \overset{31}{?}$   
*it rains* [ $\#am^{\tilde{e}}nga\grave{a}quru\#$ ] *it rains?*

<sup>36</sup> This follows Martin's analysis of the Tokyo dialect. *Language* 28, (1957) supplement, p.17.

In such cases the difference in meaning is at the utterance level affecting the connotation, but not the lexical meaning of the morphemes involved. Pitch contrasts in lexical items can generally be accounted for by the establishment of two pitch levels, high and low.

The intensity curve in most cases closely follows the pitch curve, with the highest pitch corresponding to the loudest intensity,<sup>37</sup> but stress (intensity) is apparently used to throw emphasis on a particular word in an utterance often without interruption in the pitch contour. A feature of the Sakawa dialect is the use of a sustained high pitch 4 to give emphasis to an utterance. This is used in excited rapid speech. Pitch 4 then may be regarded as a morph indicating excitement or animation. This sustained high pitch emphasis morph obliterates the original accent of the phrase. Except for such cases of emphatic high pitch every utterance contains pitch three and most contain two of the four pitch phonemes. The nature of the pitch on the mora before # can be indicated by one of the three intonation terminals † † or †. The intonation terminals are always accompanied by #, which is not usually included in the transcription. † † and † can be regarded as morphologically conditioned variants of #.

### 3.3.2. Pitch distribution

If differences in intonation are not taken into account, an examination of the Sakawa corpus reveals that most sequences of segments occurring between pauses fall into the following pitch arrangements:-

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37. The correspondence is not always exact. Pitchmeter analysis shows that in many cases the morae which have the prominent auditory effect are not high-pitched. The actual nature of the Japanese accent is probably more complex than a simple high/low pitch contrast. J.V. Neustupný, "Nihongo no Mittsu no Akusento-tan'i no Kanōsei ni tsuite", 日本語の三つのアクセントの単位の可能性について. (On the possibility of three elements in the Japanese accent), *Onsei no Kenkyū*, 11 (1965), 233-239.

- |                       |              |                       |
|-----------------------|--------------|-----------------------|
| (i) [ʃsakuɾãŋgasaku#] | high level   | cherry blossoms bloom |
| (ii) [ʃameonameru#]   | high low     | lick a lolly          |
| (iii) [ʃkasaosasu#]   | low high     | put up an umbrella.   |
| (iv) [ʃamẽŋgafuru#]   | low high low | rain falls            |

At normal conversational speed each of the above phrases is pronounced in a single breath as an unbroken sequence of morae. Such phrases are called pause groups.<sup>38</sup>

In the pause groups listed above, only the position of the change from high pitch to low pitch is significant. This can be indicated by marking the final mora before a low pitched mora with the accent mark ´. If sentence intonation is not taken into account it is possible to represent the phonemic lexical pitch of the Sakawa dialect with a single accent mark ´. All morae before ´ are high-pitched, all morae after ´ are low pitched. In the case of the Sakawa dialect, however, there is a contrast between utterances with an initial low-pitched mora and utterances with an initial high-pitched mora, (as in i and iii above). If an utterance begins with a low-pitched mora the immediately following mora is high-pitched. Two low-pitched morae cannot stand together at the head of a pitch contour. Utterances beginning on a low-pitched mora are regarded as being potentially preceded by a high-pitched mora indicated by the accent mark ´ before the first mora in the utterance. In this position the accent is called a preaccent. It indicates that only the immediately following mora is low-pitched. The phonemic interpretation of the sentences given above is (i) /ʃsakuɾãŋgasaku#/ , (ii) /ʃame'onãmeru#/ , (iii) /ʃkasa'osasu#/ , (iv) /ʃamẽ'gafuru#/ . Unaccented phrases

38. Martin, *op.cit.* p. 16.

(i.e. phrases not bearing the accent mark ' ) are pronounced on a high level pitch.

In a phonemic transcription of the pitch of the Sakawa dialect, it is necessary to indicate:-

- 1) Whether or not the pitch phrase (pause group) begins on a low-pitched mora.
- 2) Whether or not there is a fall from high to low pitch and if so after which mora does it occur.

In slow emphatic pronunciation the five pause groups listed above might be divided into two shorter pause groups, (e.g. [#amē<sup>~</sup>nga#φuru#l]) each with its own pitch contour. Where a sequence of segments occurring between pauses cannot be further divided into sequences potentially bounded by pauses it is called a minimal pause group. The minimal pause group is also the minimal pitch contour. A minimal pause group can contain only one fall in pitch. Generally where two minimal pause groups combine to form a single longer pause group the pitch contour of the first minimal pause group becomes the pitch contour for the entire phrase. In animated or emphatic speech, however, undulating pitch contours including high-low-high sequences are often pronounced in a single pause group. This indicates a sequence of two or more pitch contours, each retaining its inherent pitch distribution. The high pitch of the first minimal pause group, however, is somewhat higher than the high pitch of subsequent minimal pause groups. The first pitch contour carries the primary accent (level 4 pitch) and subsequent pitch contours carry the secondary pitch (level 3). The shape of the pitch contour, then, varies according to the speed of discourse. The

contour [ #amē<sup>~</sup>ŋgaφuru# ] *it rains*, occurring in rapid speech is analysed as /#<sup>˘</sup>amēgahuru#/ . The emphatic or animated speech form [ #amē<sup>~</sup>ŋgaφuru# ] is /#<sup>˘</sup>amēga<sup>˘</sup>huru#/ and the very slow deliberate pronunciation [ #amē<sup>~</sup>ŋga#φuru# ] is /#<sup>˘</sup>amēga#<sup>˘</sup>huru#/ .

The occurrence of secondary pitch accent is predictable if minimal pause boundaries between pitch contours are marked by space in the phonemic notation. This space represents a junctural element indicating change in the pitch contour. It differs from # and the intonation terminals in that it is not accompanied by pause. The occurrence of this juncture and the pause phoneme # is most frequent in slow deliberate speech, decreasing as the tempo of discourse increases.

### 3.4. Lexical Pitch<sup>39</sup>

#### 3.4.1. Introductory

Although it is necessary to set up four pitch phonemes and a junctural element to account for the pitch variation found in connected discourse, the phonemic contrasts in lexical items are adequately described with two pitch levels, high and low. Generally forms elicited in the course of the phonemic analysis were marked for only two levels of pitch. Morae pronounced on a noticeably higher pitch were marked with a raised line, lower pitched morae were left unmarked.

---

<sup>39</sup> The following is a morpho-phonemic analysis of the Sakawa dialect made along the lines of Japanese linguists such as Hirayama, Kindaichi, and Hattori. Strictly speaking an analysis of the operation of pitch accent in nouns and inflected forms is only possible after a morphemic analysis has been made. The allocation of morphemes to pitch contours and the correspondences in pitch distribution in the Japanese dialects is of such importance to comparative dialectology that its inclusion in the discussion of dialect phonology can be justified.



The presence of several minimal pairs illustrates the phonemic status of pitch accent in the dialect of Sakawa.

[hanā]	nose
[hana]	flower
[amē]	a sweet
[amɛ]	rain
[hafī]	chopsticks
[hafɪ]	a bridge

### 3.4.2. Pitch Contours in Nouns

In the case of monosyllabic and disyllabic morphemes pitch distinguishes phrases rather than words. The morpheme [e] pronounced alone in citation means either *handle* or *picture*. It is only with the addition of a grammatical particle like *ga* that the pitch accent distinction becomes clear. Similarly it is impossible to tell that [kasa] *umbrella* and [sarū] *monkey* are to be assigned to different noun categories on the basis of pitch differences. Only by comparing the phrases [kasaosasu] *put up an umbrella* and [sarūngaoru] *there is a monkey* can the words be grouped into pitch contours according to the pitch of a following grammatical particle.

Monosyllabic nouns all have the same single pitch accent in citation, but fall into three pitch contours when combined with a following particle, [e] *handle* and [e] *picture*, pronounced alike, in isolation become [ēnga] (in [ēngaoreta] *the handle broke*) and [ēnga] (in [ēngaaru] *there is a picture*) when the particle *nga* is attached. Similarly [çi] *sun, day* and [çi] *fire*, although indistinguishable in citation, become [çīnga] (in [çīngāndeta], *the sun came up*) and [çīnga] (in [çīngāndeta] *fire broke out*). As [e] *picture* and [çi] *day* fall together into the same pitch contour (C)V̄ CV

(or ●▲ to use the Japanese mora analysis - where inked-in syllables indicate high pitch, 0 is the mora of a morpheme Δ a grammatical particle)- it can be seen that one-mora nouns in the dialect of Sakawa fall into three pitch contours.

1. (C)V̄ + particle GĀ ●▲
2. (C)V̄ + particle GA ●▲
3. (C)V + particle GĀ O▲

These phonetic contours are analysed phonemically in accordance with 3.3.2. into three groups:- atonic, tonic and pretonic.

1. Atonic /o/

/ʼe/ *handle*, /ʼegaoreta/ *handle broke*

/ti/ *blood*; /to/ *door*; /ko/ *child*; /ka/ *mosquito*.

2. Tonic /ó/

/há/ *sun*; /hígadeta/ *sun come out*;

/há/ *leaf*; /ná/ *name*; /ʼjá/ *arrow*.

3. Pretonic /'o/

/ʼ'e/ *picture*; /ʼ'e'okaita/ *drew a picture*;

/ʼte/ *hand*; /ʼki/ *tree*; /ʼhi/ *fire*.

Nouns of two morae followed by a grammatical particle may be grouped into four pitch contours.

1. CVCV̄<sup>+0</sup> + GĀ ●●▲
2. CVCV + GA ●O▲
3. CVCV̄ + GĀ O●▲
4. CVCV̄ + GA O●▲

<sup>40</sup> CV here represents the mora. It includes CjV and V (second mora of a long vowel).

The pitch accent contours of 3 and 4 above are the same in isolation, but must be distinguished in the phonemic analysis in order to account for the pitch of the following particle. If the fall from high to low pitch is regarded as the distinctive feature in assigning the pitch accent mark, groups 3 and 4 may be distinguished by placing an accent on the final mora of 4, indicating that a following mora is low pitched. The four categories of two-mora nouns are analysed phonemically as:-

(# is omitted in the notation)

1. Atonic /00/

/ʼame/ *lolly*; /ʼameʼonámeru/ *lick a lolly*; /ʼusi/ *cow*; /ʼume/ *plum*;  
/kaki/ *persimmon*; /kaze/ *wind*; /sake/ *sake*.

2. Tonic /00̂/

/húju/ *winter*; /hújuwa sámui/ *winter is cold*; /ʼúde/ *arm*; /ʼíro/ *colour*;  
/ʼási/ *leg*; /túki/ *moon*; /kámi/ *paper*; /hási/ *bridge*; /kúmo/ *cloud*.

3. Pretonic /˘00/

/˘kasa/ *umbrella*; /˘kasao ˘sasui/ *put up an umbrella*; /˘hasi/ *chopsticks*;  
/˘kata/ *shoulder*; /˘matu/ *pine tree*; /˘hari/ *needle*; /˘sora/ *sky*.

4. Pretonic-final accent /˘00̂/

/˘sarú/ *monkey*; /˘sarúgaoru/ *there is a monkey*; /˘ʼakí/ *autumn*;  
/˘ʼame/ *rain*; /˘kumó/ *spider*; /˘kóʼé/ *voice*.

Nouns of three morae fall into five pitch contours, but in this case the pitch of the particle following is irrelevant. The pitch of the particle is predictable from the pitch of the preceding mora.

The five pitch contours are:-

c̄VC̄VC̄V̄	●●●	[kasumi]	mist
c̄VC̄VC̄V	●00	[ékubo]	dimple
c̄VC̄VC̄V	●●0	[kenuki]	tweezers

CVCVCV̄	000	[usãŋgi]	rabbit
CVCVCV̄	000	[azuki]	red bean

Phonemically the contours are arranged in one atonic, two tonic and two pretonic groups.

Atonic /000/

/kasumi/ *mist*; /kasumigakakaqt sóru/ *it is misty*; /juwasi/ *sardine*;  
/kimono/kimono; /kuruma/ *car*; /keburu/ *smoke*.

Tonic (i) Initial accent /000/

/tíkara/ *strength*; /tíkaraga tújoi/ *(he) is strong*; /'ábura/ *oil*;  
/mísaki/ *cape*; /hátati/ *twenty (age)*;

(ii) Medial accent /000/

/'atáma/ *head*; /'atámaga'íta'i/ *head is sore*; /'otóko/ *man*;  
/'onágo/ *woman*; /katána/ *sword*; /hasámi/ *scissors*;

Pretonic (i) Level /'000/

/'usagi/ *rabbit*; /'usagiga'oru/ *there is a rabbit*; /'unagi/ *eel*;  
/'mimizu/ *earthworm*; /'nezumi/ *rat*.

(ii) Undulating /'000/

/'tokáge/ *lizzard*; /'tokágega'oru/ *there is a lizzard*; /'hutátu/ *two*;  
/'itáti/ *weasel*.

Four syllable nouns fall into seven pitch contour categories.

Atonic /0000/	[0000]	[ad̄z̄isai]	/'adisai/ hydrangea
Tonic /0000/	[0000]	[aiθat <sup>s</sup> u]	/'áisatu/ greeting
/0000/	[0000]	[aθãŋgao]	/'aságao/ morning glory
/0000/	[0000]	[asiáto]	/'asiáto/ footprint
Pre-tonic /'0000/	[0000]	[na <sup>n</sup> gãŋgut <sup>h</sup> u]	/'nagagutu/ gumboots
/'0000/	[0000]	[taihoo]	/'taihoo/ cannon
/'0000/	[0000]	[kut̄giba'si]	/'kutibási/ beak, bill

Five syllable nouns fall into nine pitch contour categories.

Atonic <sup>41</sup>	/00000/	[00000]	[se <sup>ˉ</sup> m <sup>ˉ</sup> õ <sup>ˉ</sup> ŋka]	/se <sup>N</sup> monka/	a specialist
Tonic	/0̇0000/	[0̇0000]	[f̄uko:hei]	/h̄úkoohi/	unfairness
	/00̇000/	[00̇000]	[go <sup>ˉ</sup> f̄in <sup>ˉ</sup> θet <sup>s</sup> u]	/go <sup>s</sup> i <sup>N</sup> setu/	kindness
	/000̇00/	[000̇00]	[ana <sup>ˉ</sup> tá <sup>ˉ</sup> gata]	/ana <sup>t</sup> tá <sup>g</sup> ata/	you (plural)
	/0000̇0/	[0000̇0]	[get <sup>h</sup> u <sup>ˉ</sup> jo:bi]	/get <sup>u</sup> joó <sup>ˉ</sup> bi/	Monday
Pre-tonic	/ˈ00000/	[00000]	[kaku <sup>ˉ</sup> ðato:]	/ˈkaku <sup>z</sup> atoo/	cube of sugar
	/ˈ0̇0000/	[0̇0000]	[oto:θã̄]	/ˈotóosan/	father
	/ˈ0000̇0/	[0000̇0]	[mõ <sup>ˉ</sup> mbu <sup>ˉ</sup> fo:]	/ˈmonbús <sup>joo</sup> /	education department
	/ˈ00000	[00000]	[katat <sup>ˉ</sup> umuri] <sup>42</sup>	/ˈkatatumú <sup>ˉ</sup> ri/	snail

Nouns over five syllables, almost all are compound morphemes, follow the general pattern, falling into atonic, tonic, and pre-tonic groups. Tonic forms may carry an accent on any mora. Pre-tonic forms may have no additional accent or an accent on any mora except the first and the last. The number of pitch accent contours<sup>43</sup> in nouns of more than one mora is calculated with the formula  $2n - 1$ , where  $n$  is the number of morae.

<sup>41</sup> This list was compiled from Doi, *Tosa no Kotoba* and elicited from Okazaki. The responses were the same as those for Kōchi-shi. See Doi, *op.cit.* p.115.

<sup>42</sup> /katatumúri/ *snail*, like many of the words in this list, is a loan word from the standard dialect. Sakawa dialect has /dendenmusi/ for *snail*. The pitch contour, however, follows the Sakawa pattern and differs from that of the Tokyo dialect, which has [katatsumuri], *Zenkoku Akusento Jiten*.

<sup>43</sup> The pitch contour here corresponds to Hirayama's *hanseitēki kata* 反省的型 (the considered pattern) representing the informant's accent consciousness in slow deliberate speech. See *Nihongo Onchō no Kenkyū*, p.21.

The pitch accent contrasts of nouns in the Sakawa dialect are summarized in the following chart.

THE PITCH ACCENT OF NOUNS - SAKAWA DIALECT

Number of Morae	1	2	3	4	5
Atonic	0	00	000	0000	00000
	e	ame	kasumi	adisai	seNmoNka
Tonic 1.	0̇	00̇	000̇	0000̇	00000̇
	hí	húju	ékubo	áisatu	húkoohi
2.			000̇	0000̇	00000̇
			usági	aságao	gosínsetu
3.				0000̇	00000̇
				asiáto	anatágata
4.					00000̇
					getujoóbi
Pretonic	˘0	˘00	˘000	˘0000	˘00000
	˘e	˘kasa	˘kenuki	˘nagagutu	˘kakuzatoo
2.		˘00	˘000	˘0000	˘00000
		˘sarú	˘azúki	˘taihoo	˘otóosaN
3.				˘0000	˘00000
				˘ku+ibási	moNbúsjoo
4.					˘00000
					˘katatumúri

## 3.4.3. Pitch Contours of Verbs and Adjectives

Nouns and other uninflected words retain the same pitch contour regardless of the environment in which they occur. With inflected forms (verbs, adjectives and the copula), however, rules for pitch placement must be included in the grammatical analysis to account for changes in the pitch contour throughout the paradigm.

In this section verbs and adjectives are examined in their non-past form as simple lexical items ignoring accent shifts in other sections of the paradigm.

## Two Mora Verbs

Atonic. 00 e.g. [uru] to sell, [uruçito] person who sells;

/oku/ to place; /ka'u/ to buy; /kasu/ to lend;  
 /kiku/ to hear; /saku/ to bloom; /tsumu/ to load;  
 /tobu/ to fly; /naku/ to cry; /naru/ to sound;  
 /huru/ to shake; /maku/ to wind; /'iku/ to go;  
 /'juu/ to say; /kiru/ to wear; /suru/ to do;  
 /niru/ to resemble; /neru/ to lie down.

Pretonic.<sup>45</sup> '00. [kaku] to write; [kakuçito] person who writes

/kaku/ to write; /katu/ to win; /kuru/ to cut;  
 /kuu/ to eat; /kogu/ to row; /tatu/ to stand;  
 /tomu/ to take; /nomu/ to drink; /huru/ to fall;  
 /maku/ to sow; /kuru/ to come; /zeru/ to emerge.

<sup>45</sup> The phonemic contrast between atonic and pretonic verbs is demonstrated by the minimal pairs:-

/kiru/ to wear;	/kuru/ to cut.
/huru/ to shake;	/huru/ to fall.
/maku/ to wind;;	/maku/ to sow.

Tonic. 00 The only two-mora tonic verb is *ōru* to be, to exist.

[ōru] is; [ōru.toki] when he is.

2. Three mora verbs also fall into three pitch contours.

Atonic. 000 [aŋgaru] to rise; [aŋgarutoki] when it rises;

/ʼataru/ to hit; /ʼutaʼu/ to sing; /ʼokuru/ to send;

/kazaru/ to decorate; /kawaru/ to change;

/sagasu/ to look for; /susumu/ to advance;

/narabu/ to line up; /noboru/ to climb;

/ʼakeru/ to open; /ʼageru/ to raise; /uʼeru/ to plant;

/kiʼeru/ to disappear; /suteru/ to discard.

/hareru/ to swell; /makeru/ to lose; /ʼjakeru/ to burn.

Tonic. 000 All tonic verbs of three morae carry the accent on the

first mora. [amaru] to exceed; [amarutoki] when it exceeds.

/ʼūramu/ to resent; /ʼōtosu/ to drop; /ʼōmoʼu/ to think;

/kūmoru/ to become cloudy; /tūkuru/ to make; /hīkaru/ to shine;

/wākaru/ to understand; /ʼīkiru/ to live; /ʼōkiru/ happen;

/ʼōtīru/ to fall; /sāmeru/ to awake; /tāteru/ to build;

/nāgeru/ to flee; /hāreru/ to fine up; /mīʼeru/ to be visible;

/wākeru/ to divide.

Pretonic. ˘000. Only a small number of these verbs could be found in

the Sakawa corpus. [ʼajumu] to walk; [ʼajumugito] person who walks.

/ʼkakusu/ to hide; /ʼhairu/ to enter; /ʼmairu/ to go;

3. Four mora verbs are as follows:-

Atonic. 0000 [awaremu] to pity; [awaremu gito] person who pities;

/ʼjasinaʼu/ to rear; /Nmareru/ to be born; /kasaneru/

to pile up; /naraberu/ to line up.



**Tonic.** Tonic four mora verbs are of two types, those accented on the first mora and those accented on the second mora.

i) Initial accented verbs. 0000.

/ʼátekomu/ to calculate; /ʼíharu/ to insist;  
/ʼúʼekomu/ to implant; /ʼúkitatu/ to float up;  
/kúmidasu/ to scoop out.

ii) Second mora accented verbs. 0000

/ʼatúmaru/ to gather; /ʼyorókobu/ to rejoice;  
/shiráberu/ to investigate; /nagáreru/ to flow;  
/hanáreru/ to part.

**Pretonic.** Pretonic verbs can be divided into pretonic-level and pretonic undulating depending on the presence or absence of a second high pitch phoneme.

i) Pretonic level verbs. ʼ0000.

[ut̚ɕikeθu] to deny; [ut̚ɕikeθucito] person who denies;  
/ʼkakikesu/ to scratch out; /ʼkotaeru/ to answer;  
/ʼiijoru/ to say.

ii) Pretonic undulating verbs. ʼ0000.

[kiɾ̄ɪkomu] to cut into; /ʼkuítuku/ to bite;  
/ʼkomíʼaʼu/ to crowd together.

Adjectives in the non-past form generally fall into two main pitch contours regardless of the number of morae they contain. Minimal pairs like /ʼatúʼi/ *thick* and /ʼátuʼi/ *hot* illustrate the phonemic status of pitch in distinguishing adjectives.

1. Two Mora Adjectives.

**Tonic.** 00 [00] /náʼi/ *is not*; /náʼi híto/ *man who has not*  
/ -táʼi/ *is desirable* (suffix) /ʼikitáʼi/ *wants to go*.

Pretonic. ˈOO [OO] /ˈee/ good /ˈeehito/ good man.

2. Three Mora Adjectives.

Initial accented /OOO/

/ˈátu'i/ hot; /ˈóo'i/ numerous; /kúro'i/ black;  
 /síro'i/ white; /táka'i/ high; /nága'i/ long;  
 /hája'i/ fast; /híku'i/ low.

Medial accented /OOO/

/ˈatú'i/ thick; /ˈusú'i/ thin; /katá'i/ hard;  
 /kurá'i/ dark; /toó'i/ distant.

3. Four Mora Adjectives.

Tonic. Second mora accent /OOOO/

/ˈi'jásii/ humble; /kuwásii/ detailed;  
 /sitáfii/ intimate; /suzúsii/ cool.

Third mora accent /OOOO/

/ˈa'ja'úi/ dangerous; /kanasii/ sad;  
 /tootó'i/ precious; /kosobá'i/ ticklish.

If the final -i of the non-past form of the adjectives is regarded as the suffix and the remainder the stem, it is possible to say that adjectives of more than two morae distinguish stem final and stem penultimate accent.

## APPENDIX TO CHAPTER 111

## SAKAWA DIALECT TEXT

The following is a transcription of a dialogue between Okazaki Noboru (male, aged sixty-one) and Ueda Masakazu (male, aged forty-seven), recorded at the Sakawa town office in 1968. The transcription of the tape-recorded material was made in Sydney in 1970 with the help of the Kōchi informant, Miss Tsuda Saeko, and a pitch recorder of the Phonetics Laboratory of the Department of English at the University of Sydney. The pitch contours have been simplified to show major pitch variations and are generally confined to two levels, high and low. The first line of the text is a broad phonetic transcription, the second a phonemic transcription based on the analysis of Chapter 111. A standard Japanese translation and an approximate English translation are included. Palatalized phones are indicated in the phonetic transcription by an acute accent over the consonant concerned, e.g.  $\acute{k}$  is equivalent to  $k$  of the body of Chapter 111. This should not be confused with the acute accent over vowels in the phonemic transcription which indicates a fall from high to low pitch. In the second line of transcription word boundaries (the divisions are made in analogy with divisions in the standard language) are indicated by space. # is not marked where it corresponds to an intonation terminal. (st) in the phonemic line indicates a stutter. Stress is marked // in the phonetic transcription.

Okazaki [ #u'ēdahāno: → oitatʃiʔtʃu.to → joβainiitakota →  
 /#'u'edahaN ʔoo → 'o'itatiʔ tjuu to → 'jobai ni'ita kota →  
 植田さんねえ 生い立ちと言うと 夜這に行つたこと

Ueda [ laughs #jobaikane ↓ ]  
 / #'jobai ka ne ↓ /

Okazaki [ #ōnna no hito ni #cika retāngai → joβanpaito ju:ʔlgaru  
 /# oNnāno hito ni# hikāreta gai → 'jobai to juuNgaru  
 女の人に 引かれること 夜這と言うのがある  
 tʃu:ʔra → sorāŋ → do:ʔitakotoŋgara:toju:kotoŋinatʔte →  
 tjuuga → soraN → 'doó hita koto garaa to juu koto ni naqte  
 と言うか それは どんなことか と言うことになって

θoreoθetʃ ume:hiʔtawakejʰo ↓ Ueda [ #n: → ] Okazaki [ a: →

sore 'o setumee hita wake 'jo ↓ (U) /#NN / (0) /#'áa

それを説明した訳だよ うん あゝ

sorewa → ko: wakaisiŋra → ko: → nisēgimiko: →

sore wa → koo#wákaisiga → koo → nisegimi koo →

それは こう若い衆か こう ?

ŋotoŋoto → ŋotoŋoto → ko: → joβupbaininatʔtēŋarāgo: →

gótogóto → gótogóto → koo → 'jotuNbai ni naqté gara goo →

こそこそ(?) こそこそ こう 四つん這いになってから こう

Okazaki Uedasan, speaking of your early experiences, have you ever been on a yobai (night time prowling to room of unmarried girl).

Ueda Oh, yobai is it? Ha, ha!

Okazaki Yes it's a custom they explained where you are enticed by a woman. Yobai they call it.

Ueda Oh. Okazaki Yes. It's when the young men got down on all fours (yotsumbai) and secretly sneaked into a girl's bedroom.

onágonofinçit<sup>s</sup>ue → a: → naikōndeiki jdt<sup>o</sup>ta ↓ ho:huruto: →  
 'onágonof<sup>#</sup>siNhitu'e → 'áa → 'haikoNde 'iki, 'jóqta ↓ hoo huru too →  
 女の子の寝室へ あゝ 這込んで行った そうすると  
sono → o:wakaisuwa → sono → jotumbaininat<sup>o</sup>te  
 sono → 'oowaka'isju wa → sono → 'jotuNbai ni naqte  
 その 大若い衆(?)は その 四つん這いになって  
muhuaehānnotokoroekuto → tokorōra → zju.ūgorokuba:no  
 múhumaN no tokoro e iku to → 'tokoroga → zjúgoroku baa no  
 娘さんの所へ行くと…… ところか" 十五六位の  
jat<sup>s</sup>uwa mādakei kodzake → šūndo, fikatūñidzake →  
 jatu wa mada<sup>#</sup> kéiko dja ke → huNdosikátugi dja ke →  
 やつは 未だ 稽古だから 禪かつき" だから  
šo.riosaide → mat<sup>s</sup>/iot/a.ñikana ↓ sa:t<sup>o</sup> toju:ta<sup>o</sup>a  
 zoori'o saide → 'mati'otjaN'ikana ↓ saaq ↑ to'júutara  
 草履をさげて(?) 待てなければいけない。サッと言ったら  
nīgenaikānke: ↓ sonojakuojai<sup>o</sup>takotōnga<sup>o</sup>arutoju.te →  
 nígena 'ikaN kee ↓ sono'jáku 'o 'jaqta koto ga 'aru to'juute →  
 逃げなければいけないから その役をやったことか" あると言った  
koreo jobai ↓ jotumbaidzanai ↓ jobaidza ↓  
 kore of<sup>#</sup> 'jobai ↓ 'jotuNbai dja náí ↓ 'jobai dja ↓  
 これを夜這。 四つん這いじゃない よばいじゅ。

The older youths would sneak into the girl's room on their hands and knees. But the boys of fifteen or sixteen were still in training. Because they were only low rank (literally those who carried the loin cloth [for a sumō wrestler]) they had to wait there holding the sandals [of the older youths]. If they said sa! then [the older boys] had to run away. They say they took that part. This they called "yobai" not "yotsumbai" but "yobai".

Ueda #sonojobaidzo:kane → gōgēnwa Okazaki [#ē → e] ↓  
 sono 'jobai djoo ka ne ↑ gōgeN wa ↑ (0) / #e → 'ee ↓  
 その 夜這 だらうかね。語源は えい  
xatanoho:niwado:kuaat<sup>1</sup>te → θəŋokotowa ↓ konoatani → nak<sup>2</sup> →  
 'hata no hōo niwa # 'oōku'áqte → sono koto wa ↓ kono 'ata ni (st.)  
 階多の方 には よく あつて ... そのことは この 辺 に  
nakai<sup>2</sup> → kota:nakat<sup>2</sup>ta ↓ | Ueda [#jok:at<sup>2</sup>ta at<sup>2</sup>ta  
 'nakai kotaa nakáqta / (U) / #jóo áqta#áqta  
 ない ことはなかつた よく あつた あつた  
konoñēn úi ↓ | Okazaki [#ún → at<sup>2</sup>tadejo ↓] Ueda [#ano: → ne ↓  
 kono heN ni ↓ / (0) / #'ún → 'áqta de'jo ↓ / (U) / #anoo → ne ↓  
 この 辺 に ぶん あつたんだよ あの ね  
ataqitatsinojobai toju:nowane: → gōgēnwane: → ōnnao → joru →  
 'atahitatino# 'jobai to juu no wa ne → gōgeN wa nee → oNna'o 'joru  
 私達の 夜這 と言のはね 語源はね 女を夜  
wakaiōnnaobajaukíni → jobai dzo:kato → ko.ju.kaisakuo  
 wakai 'oNna 'o bajau kini jobai djoo ka to koo'juu kaisjakuo  
 若い 女 を 奪うから 「よばい」だらうかと こう言う 解釈を  
si'jot<sup>2</sup>tajo ↓ | Okazaki [#sōdzonairasi: ↓] Ueda [#jotumbai  
 si'jóqta'jo / (0) / #sōo dja nai rasíi ] (U) / #'jotunbai  
 したよ そうじゃ ないらしい ㊦ん這い

1 This phrase is whispered.

2 A mistake for nai

Ueda. So you think that's the origin of yobai. I wonder.

Okazaki. Yes, yes. They did it a lot in Hata. And it wasn't unknown in this area either.

Ueda. It happened a lot in this area. Okazaki. They did it alright

Ueda. By the way, we used to say that the origin of the word was from yo (night) and bai (snatching) because you snatched a girl at night. That's how we interpreted it.

Okazaki. No, it seems that's not correct.

Ueda

ka arewa ↓ Okazaki [#ja<sup>o</sup> jo<sup>o</sup> ũmbaidzato →] Ueda [#a: naru<sup>o</sup> do ↓]  
 ka'are wa ↓ / (0) / # (st) 'jotuNbai djá to → / (U) / # 'áa# 'naru'edo  
 か あれは 四つん這いだ と あ、なるほど

3

Okazaki.

ko: → haikōndara → gošori<sup>o</sup>gošori<sup>o</sup>gošori<sup>o</sup>gošori<sup>o</sup> → haikomana ↓  
 koo 'haikoNdara gozori gozori gozori gozori haikomana  
 こう 這い込んだら こそこそこそこそ (?) 這い込まない  
 ikat<sup>o</sup>ke: → sora: → jarunonja:ne → nakanakašonowakaisini<sup>o</sup>ci<sup>o</sup>ketuo  
 'ikaN kee soraajaru no nja ne nakanaka sono wakaisi ni hiketu o  
 といけないから それをやるのにはねえ なかなか その若い衆に秘訣を

naro:itawa ↓ Jošioakeroriniwane → koreošimesanaika<sup>o</sup>no: ↓

#naro<sup>o</sup>ta wa ↓ sjoozi'o 'akerori niwa ne → kore'o simesana 'ikaNroo<sup>o</sup>  
 習ったよ 障子を開ける折にはねえ これを湿すなきやいな

Ueda.

[šimesānikan ↓] Okazaki [#hoide → ošik<sup>o</sup>kō<sup>n</sup>de →

/simesaN 'ikaN / (0) / # hoide 'osiqko de

湿すなきやいけない それで おしこで

yōzōngōntošimecitšote → otosenjoi:ni ko:akeruwa<sup>o</sup>keja ↓

zjoNzjoNzjoN to# 'simehitj<sup>o</sup> ite oto seN joo ni# koo akeru wa<sup>o</sup>keja

ししし と 湿して置いて 音 (なほ) に こ) 開ける訣だ

so:hite → jat<sup>o</sup>tato ↓ wahimo → mada keikēganakata ↓

so<sup>o</sup> hite → jaqtá to ↓ wāhimo → mada keikeN ga nákaqta ↓

そして やたと、私も 未だ 経験がなかつた

3 This phrase is pronounced on a sustained high pitch. The pitch which is higher than the usual high pitch acts as a morpheme expressing excitement or emphasis. It is pitch /4/ of the phonemic analysis.

Ueda You mean it's from yotsumbai (on all fours)?

Okazaki Yes, they say it's from yotsumbai. Ueda. Oh I see.

Okazaki Yes, because you have to get down like this and sneak in crawling along. You know to do it the young ones learnt all the tricks. To open the shōji (sliding door) you have to wet them. Ueda. You must wet them. Okazaki. So they'd piss on them and make them wet so they wouldn't make a noise. That's how they opened them, they say. I didn't have any experience of this.

- Okazaki naid<sup>2</sup>ud<sup>2</sup>u → kjo:tonono:ni itāndzake ↓ keikēn a: → naikēndo →  
 náí dudu → kjóoto no hoo ni'itaN djake ↓ keikeN'aa → náí keNdo →  
 ないまま 京都のオに行つたんだから 経験はな<sup>い</sup>けど  
θo:ju:kotowa → nakanakanazimenok<sup>2</sup>ünrēngga müduka / i:wakēda ↓  
 soo'juu koto wa → nakanaka hazime no kúnreN ga#mudukásii wake da ↓  
 そう言うことは なかなか 始めの 訓練が むずかしい 訳だ
- Ueda watajirūg → arenūndzane: → ano: → area: →  
 'watasira ga 'are naN dja nee 'anoo 'are'aa  
 私等が あれ何だね あの あれは  
ikū<sup>2</sup>tuba:nckorōdzō:ne: → zu:çit<sup>2</sup>ihat<sup>2</sup>si ↓ gak<sup>2</sup>ko:ōdete → dēruka  
 'ikútu baa no koro djoo nee → zjuuhitihati ↓ 'gaqkoo'o dete → deruka  
 いくつ位の頃だね ね 十七八 学校を出て 出るか  
dēmba:nckorōdzane: → Okazaki [ #ē: ] korōni → m →  
 'deN baá no koro dja nee (0) / # 'ée / 'koro ni N  
 出ない位の頃だね え、頃に うん  
zu:çit<sup>2</sup>ihat<sup>2</sup>si → zu:kūngoronimonat<sup>2</sup>t<sup>2</sup>ot<sup>2</sup>taro:ka →  
 zjuúsitihati → zjuúku N goro nimo# 'naqtjótaro ka  
 十七八 十九の頃にも なつていただろうか  
gūntai ikumaedzake ↓ Okazaki [ #e. ] çitobān → sono →  
 gūntai iku mae dja ke ↓ (0) / # 'ée / 'hitobaN → sono →  
 軍隊に行く前だから え、一晩 その

- Okazaki Before I could get the chance I went off to Kyoto. I have not experienced it myself, but it seems the first training is very difficult.
- Ueda You know we... I wonder how old we were. Seventeen or eighteen. It must have been just around the time we left school.
- Okazaki Oh, yes.
- Ueda Yes, seventeen or eighteen. Perhaps we were even nineteen. It was before we went to the army. One night...



- Ueda tureteit<sup>o</sup>tʃo: toju:wa ↓ Okazaki [#ē:→] θāmpaikakūnga ↓  
 turete ,iqtjoo to'juu wa ↓ (0) /#'ée↓ / 'seNpaikaku ga ↓  
 連れて行ってやろうと言うよ え> 先輩 が
- nā: → ju:mōndzake: → baʃowadokkaju:tara → ōgawadza Okazaki  
 nēe ,juu moN dja kee básjo wa doqka ,juutar ,ogáwa dja  
 ねえ 言うものだから 場所はどこかと言たら 小川だ  
 [#he:→] ōgawano: → ɛ:<sup>4</sup> → taʃika ʃuruáða dzat<sup>o</sup>ta tomo: ↓  
 /#hee / ,ogáwa no → tasíka # huru'áza djaqta tomo: ↓  
 え 小川の たしかに 古字 だ、たと思ふ  
 Okazaki [#e:↓] horekaracite: → e: → nanijo: → ō:ʔō:<sup>5</sup>  
 (0) /#'ee / hore kara hite → 'é → 'nani'jo ↑ 'oo →  
 え> それから (して) あ、あれだよ お、
- mihari<sup>o</sup>si'joranaikān ↓ Okazaki [#aū↓] ʃimozimodzake ↓  
 mihari'o si'jorana iikaN (0) /#'aa / simozimo dja ke  
 見張りをしなければいけない あ、 年下 だから
- kotʃiwa ↓ Okazaki [#ē:→] ū: ↓ nde → θono sempaikakūnga →  
 'kotiwa ↓ (0) /# 'ée↓ / ,uN ↓ 'Nde → sono sempaikaku ga →  
 こっちは え> うん それを その 先輩 が
- θakiini → so:toto θononakanomojjo:ukārgai<sup>o</sup>ni 'ika ↓ tonokiwae ↓  
 sáki ni→soóqto ↓ sono naka no mójo'o'ukagai ni'ika ↓ to no kiwa'e ↓  
 先に そと その中 の 様子を伺いに行きます戸の際へ

4 This sound is ingressive. It is not included in the phonemic analysis.

5 A hesitation form. A slow, creaky nasal vowel.

Ueda ....the older boys said they'd take me along. The place was Ogawa, yes, that's right, it was the old village (Furuaza), I think. So we went and we had to have a look-out. I was younger. The older boys went on ahead to check the layout inside. They went up to the edge of the door.

Ueda

ama<sup>n</sup>dōga<sup>o</sup>:butat<sup>o</sup>t<sup>o</sup>fat<sup>o</sup>tene: → it<sup>o</sup>si<sup>o</sup>bu → ko: → ma<sup>n</sup>da → ano: →

'amado ga#'cōbu taqtjaqte nee → 'itību → koo → 'mada. 'anoo →

取手が 大半 締っていてねえ 一部 こう 未だ あの

so:zīgāsuit<sup>o</sup>fat<sup>o</sup>tanane → Okazaki [#e:↘] so:zīdōnga<sup>o</sup>at<sup>o</sup>tangane ↓

sjoozi ga snitjoqta ga ne → (0) /#ee↘/ sjoozido ga áqta ga ne ↓

障子 び 開いていたんですよ 障子戸が あたもので

sok<sup>o</sup>karahairikomana<sup>o</sup>sijana<sup>o</sup>ito → Okazaki [#ē:↘] ju:kotō<sup>n</sup>de →

soqkara hairikomana sija nái to → (0) /#ēe↓] 'juu koto de →

そこから入り込まなければ仕様がないと え、言うことよ

dzi:t<sup>o</sup>to → ma: → sempaikakūga<sup>o</sup>iki<sup>o</sup>jot<sup>o</sup>ta ↓ hoika: → wasi<sup>o</sup>mo →

diiqto → máa → 'seNpaikaku ga#'íki<sup>o</sup>joqta ↓ hoi kaa → wási mo →

そと まあ 先輩達が 行った それから 私も

daitai → ano: → sonoçitorānga → saki<sup>o</sup>itaku<sup>o</sup>ai<sup>o</sup>gahairikaketa

daitai → 'anoo → sono hitoru ga → saki'ita kumi ga #'hairikaketa

大体 あの その人達が 先に行った組が 入りかけた

mōndzakēn → Okazaki [#ē:↘] ānsi<sup>o</sup>site → nani<sup>o</sup>jō<sup>o</sup>ita<sup>o</sup>mo<sup>o</sup>nja ↓

moN dja keN → (0) /#ee↓/ 'aNsīN site → 'nani<sup>o</sup>jō<sup>o</sup>#'íta moN'ja ↓

もんだから え、安心して 行ったんだ

sot<sup>o</sup>t<sup>o</sup>sie → ki<sup>o</sup> → ki<sup>o</sup>vamāde ↓ Okazaki [#ē:↓] itatokorōnga

soqti'e → (st) ki<sup>o</sup>wa made ↓ (0) /#ee↓/ 'itatokoro ga

そちらへ 際まで え、行った所が

śanto → sonohora → mitukerarete → ojādzisāni ↓ Okazaki [#ē:↘]

sjaNto → sono hora → mitukerarete → ojādisaN ni ↓ (0) /#ee↓/

ちゃんと ほら 見付けられて 親父さんに え

Ueda

Most of the shutters were shut, but one of the sliding doors was still open. Then they had to crawl in. So the older boys went in silently. As another group was going in first I didn't worry. I went up to the door, but just as I got there we were discovered by the old man.

Ueda

xojæ:ʔtʰe dukaretawakejo ↓ Okazaki [#ē:→] taɲmarrukanĩneta  
 'hojaáqte#'dukareta wake 'jo ↓ (0) /#'ee↓/'taNmaruka nígeta #  
 ほああと 怒かられか誤よ 之 - 生島命 逃げた

nĩneta ↓ sáɲsowa → mitʃoitʰuro: → ãɲgariɲutʃio dʒutʰoko: →  
 nígeta ↓ sáɲsjo wa → mitjo 'ituroo ↑ 'agariguti'o dúqto koo  
 逃げた 最初は 道を行かろ; 上り口をすゝところ

hairĩɲutʃio haitʰtetakorōgasay → deɲakewa kōndlo → tomo  
 'hairĩguti'o haiqteta tokoro ga#sáa ↓ degake wa kōndo → to mo #  
 入り口を入っていた所がさあ 出る時は今度すも

doɲtʰɲigado:ka mákʰuráike ↓ ma: → nĩɲenaikana ↓ Okazaki [#ē:→]

'doqti ga doo ku máqkuráike ↓ máa → nĩgena'ikana ↓ (0) /#'ee→/  
 ど;か どうか 真暗いから(見えない) 逃 逃げなまやいけな。 うん

dáikōnouetʃarunakao → durĩndurĩndurĩn → háɲsita ↓ tōhito ma: →

dáikoN o'u'etjaru naka'o 'durĩn# 'durĩn# 'durĩn háɲsita tōNtoma  
 大根を植えてある中を どん どん (?) 走った とんどま

koedamejo → duborĩɲɲio → Okazaki laughs. sorēɲgaɲuɲu

ko'edame jo → dúbori # ási o → sore ga húju  
 肥えだめよ すゝり 足を それが 冬

daitaisaɲuikorodzakene → ɲqbaitʃu:nowa →

daitai sámu'i koro dja ke ne → 'jobai tjuu no wa ↓

大体 寒い 頃 だからね 夜這 と言うのは

Ueda

We were scolded (by the old man who yelled out)"hey!"  
 Boy did we run! First along the path right up to the gate  
 where we'd come in, but on the way out it was dark and we  
 couldn't tell where the gate was. So we tore through a place  
 where raddishes had been planted. and then there was a night  
 soil pit. (Okazaki laughs). There it was and I stuck my foot  
 right in it. That was winter. Yobai is usually in the cold  
 time.

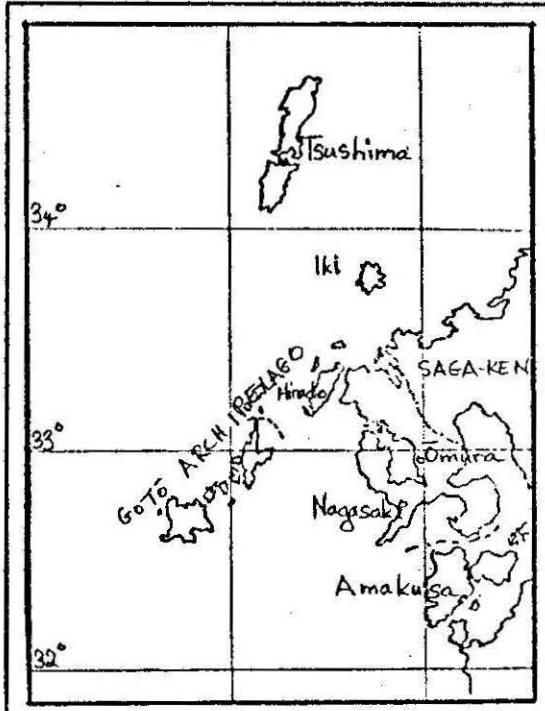
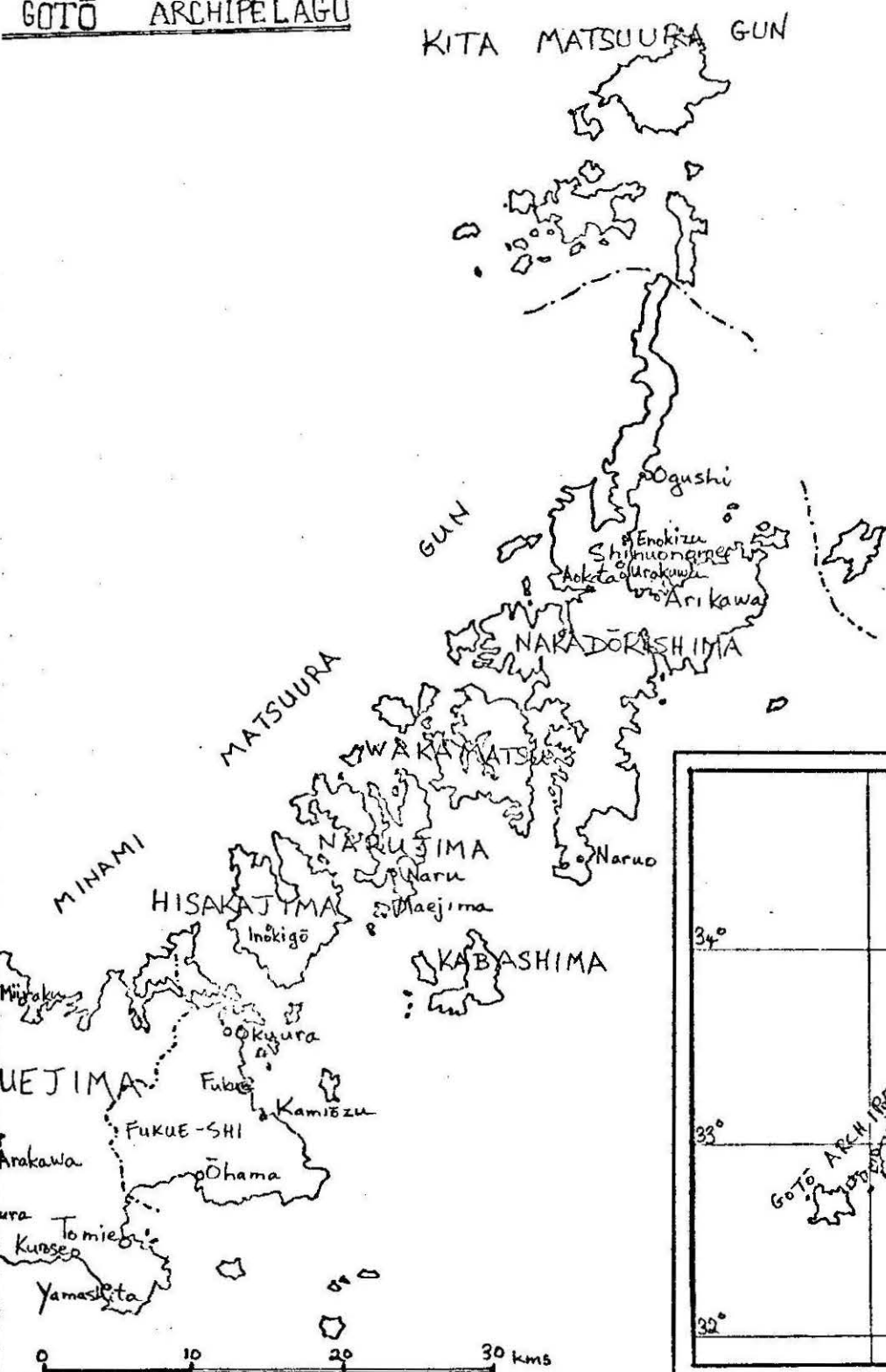
## CHAPTER 1V

## THE GOTŌ ARCHIPELAGO DIALECTS

## 4.0. Introduction

Gotō Rettō 五島列島 is a group of about one hundred and forty large and small islands off the north-west coast of Kyūshū forty miles from Nagasaki. The archipelago takes its name from the five larger islands, Fukue 福江, Naru 奈留, Wakamatsu 若松, Nakadōri 中通, and Uku 宇久. The population of around 140,000 is decreasing slightly each year with the migration of young people to the mainland. Fishing is the major industry of the area which, after Hokkaidō, is the most important fishing ground off the Japanese coast. Agriculture such as the cultivation of vegetables, forestry and cattle raising provides an important source of income on the larger islands. Some rice is grown for local consumption. The archipelago falls under the administration of Nagasaki prefecture in the divisions of Fukue-she 福江市 and Minami Matsuura gun 南松浦郡. Although the airport at Fukue has brought the city within thirty minutes flight from Nagasaki, the ferry crossing still takes four hours and before the war took eight. Many of the outlying islands are still very isolated from contact with the mainland.

GOTO ARCHIPELAGO



From August to October typhoons often cut off communications with the mainland for weeks or months on end. Before the Meiji restoration contacts with the mainland were so infrequent that a rather distinctive dialect and culture have developed in isolation. With the proscription of Christianity in 1587 many Christians fled from the Nagasaki area to the Gotō Archipelago, where they practiced their faith in secret. The flow of Christian refugees from the Kyūshū mainland to isolated off-shore islands continued until the ban on Christianity was lifted at the beginning of the Meiji era. Most of those who settled in the Gotō Archipelago seem to have come from the area of Ōmura city

大村市 in Nagasaki Prefecture. The Christian communities have remained separate from those of the original inhabitants of the islands and the dialects spoken by the two groups differ considerably.

#### 4.0.1. Aims of Chapter IV

The following account differs from chapters ll and lll in that it includes a comparison of the phonology of several dialects in the Gotō Archipelago. While a phonemic analysis of the dialect of Fukue city is the main object of this chapter, a discussion of the phonology of Tomie 富江, Shin-Uonome 新魚目, Miiraku 三井楽, and the nature of the contrast between the Christian and non-Christian dialects is also included.

#### 4.0.2. The Field Material

The material on which the following account is based was collected over a period of two weeks in August 1968 on a field trip made with

Professor Hirayama Teruo, Mr. Ōshima Ichirō and Mr. Nakamoto Masachie of Tokyo Metropolitan University. The results of the investigation were published in March 1969 as the first of a series of reports on cities, published by the Toshi Kenkyū Iinkai

都市研究委員会 (Urban Research Committee) of Tokyo Metropolitan University, under the title of *Gotō Rettō no Hōgen*

五島列島の方言 (The Dialects of the Gotō Archipelago).

4.0.3. *Dzigenohito*<sup>1</sup> 地下の人 (original people) is the term used throughout the islands to refer to the original inhabitants of the Gotō Archipelago to distinguish them from the *itsukinohito*

居着の人 (the people who have settled), the Christians who came to take refuge in the islands from the seventeenth century onwards.

The dialect studied in the main account is that of Fukue city,<sup>2</sup>

<sup>1</sup> The less polite, but more typical dialect terms *dzigenon* and *itsukimon* are also used. The term *hirakimon* 開者 (settlers) is sometimes used to refer to the Christian immigrants. *Gedo* (etymology unclear), a term used in Fukue to refer to the Christians has deprecatory connotations. *Kirishitan* (Christian) is also widely used.

<sup>2</sup> Fukue-shi is the administrative capital and cultural centre of the Gotō Archipelago. The main high school in the islands is situated here, as are the prefectural offices. Fukue city has a population of about 38,000 and covers an area of 157,74 square kilometres. From Fukue-shi Yakusho Kikakushitsu, *Fukue-shi Shisei Yōran* 1967.  
福江市役所企画室. 福江市市政要覧  
(The planning Bureau Fukue City Office, *Fukue - A Summary of the Census of Fukue City* 1967)

based primarily on the speech of Nakagawa Kazuo 中川一雄, a dajigenhito from the fishing village of Ōhama about five miles south of the centre of Fukue city proper. Nakagawa was born in Ōhama in 1923 and lived there most of his life.<sup>3</sup> He is at present employed as an official at the city office in Fukue. Ideguchi Masao 出口昭夫 (male, born 1928) and Nakazato Iwami 中里岩乙 (male, born 1927) both of Ōhama were also interviewed and recorded during normal conversation. The dialect is used as the language of normal daily business in Fukue and is not confined to older residents. For this reason the assistance of younger informants was sought as they were more often able to grasp the object of the investigation.

The corpus of material for Fukue comprises a six hundred item word list, a pitch accent eliciting list of about one thousand items and about thirty minutes of recorded dialogue. Unfortunately, as the quality of the tape-recorded material was not good enough for instrumental analysis, the N.H.K. sonosheet for the Kamiōzu dialect of Fukue<sup>4</sup> was analysed on a pitch meter at the phonetics laboratory of the Department of English at the University of Sydney. Part of the transcribed text appears as an appendix to this chapter.

4.1.- 4.4. The phonology of the Ōhama dialect - Fukue City.

4.1. The Segments

<sup>3</sup> He spent eight years abroad in the army and lived in Nagasaki for five years.

<sup>4</sup> Nihon Hōsō Kyōkai, *Zenkoku Hōgen Shiryō*, IX "Hekichi Ritō-hen III", ed. Shibata Takeshi. Tokyo. 1967. p.31



The segments recognised in the Ōhama dialect with the environments in which they occur and a brief articulatory description are set out below. Examples are given without any indication of the pitch of vowels. This is because the position of the high-pitched vowels in a lexical item varies from one informant to another and may even vary in repetitions of the same word in the pronunciation of a single informant.<sup>5</sup>

In the list of environments given below the square brackets ( [...] ) indicating phonetic transcription are omitted. C indicates any consonant segment, V any vowel segment C(-t) indicates any consonant segment other than [t], V (-i, i) indicates any vowel segment other than [i] or [i].

#### 4.1.1. The Consonant Segments

[#] Pause. No qualities.

Occurs before all consonant segments except the unreleased stops [ɱ] and [ŋ]; and before all vowels except [e]. Occurs after all vowels; [tʔ] and [ŋ].

[p] Voiceless, bilabial stop. Slightly aspirated.

Environment

Example

# _____ V (-i, i)	[pãŋ]	bread
	[pěŋ]	pen
pʔ _____ V (-i, i)	[bapʔputʔ]	frog
V _____ V (-i, i)	[patapata]	flapping
m _____ V (-i, i)	[tʃĩmpo]	penis

<sup>5</sup> Hirayama Teruo, Ōshima Ichirō, *Gotō Rettō no Hōgen*, Toshi Kenkyū Chōsa Hōkoku 1, Tōkyō Toritsu Daigaku, Toshi Kenkyū Iinkai, March 1969, p.9. 「五島列島の方言」 都市研究調査報告 1.

都市研究委員会 東京都立大学

(The Dialects of the Gotō Archipelago, Urban Research Report No.1, Urban Research Committee, Tokyo Metropolitan University)

[pʔ] Voiceless, bilabial stop. Unreleased.<sup>6</sup>

Environment

Example

V\_\_\_\_\_p

[bapʔputʔ].

frog

[p] Voiceless, bilabial stop. Palatalized.<sup>7</sup>

#\_\_\_\_\_i, ī, j

[p̄īŋ]

pin

[pj̄õmpj̄õŋ]

jumping

m\_\_\_\_\_i, ī, j<sup>8</sup>

[k̄õmpjo:]

dried gourd

pʔ\_\_\_\_\_i, ī, j<sup>9</sup>

<sup>6</sup> The symbol ʔ after a stop is used to indicate the unreleased stops, even where there is little glottal closure, as in the case of [pʔ]. Given that stops are a sequence of the operations of closure, hold and release, the unreleased stops have only closure and hold. The release, with slight aspiration occurs in the following homorganic consonant segment. See Kindaichi Haruhiko, *Nihongo On'in no Kenkyū* (Tōkyōdō- Shuppan, Tokyo 1967) p.161

<sup>7</sup> Palatalization varies considerably in degree from occasional affrication [pç] to a very weak palatal colouring due to the following high vocoid.

<sup>8</sup> Strictly speaking a nasal segment preceding a palatalized stop is itself slightly palatalized (i.e. [m̄]), but as this is hardly detectable and is not considered likely to affect the phonemic analysis it was ignored in transcription. See Bloch "Studies in Colloquial Japanese - IV, Phonemics", *Language* 26 (1950) p.101

<sup>9</sup> The environment pʔ\_\_\_\_\_i, ī, j (or pʔ\_\_\_\_\_i, ī, j.) does not occur in the material collected. It seems likely, however, that this form does occur in the dialect. c.f. Tokyo standard language [ipʔpjo:] *one sack of rice.*

[t] Voiceless, alveolar stop. Slightly aspirated.

## Environment

## Example

# \_\_\_\_\_ a, e, o, ā, ē, ō

[takʰka] high

[tetʰ]. shine

[tokʰku] sake bottle

V \_\_\_\_\_ a, e, o, ā, ē, ō

[katana] sword

[itaka] painful

[ɸʉtoka] large

[otote] day before yesterday

tʰ \_\_\_\_\_ a, e, o, ā, ē, ō

[katʰta] bought

[asatʰte] day after tomorrow

[itʰto:] first class

n \_\_\_\_\_ a, e, o, ā, ē, ō

[mēntama] eye

[māntēp.] full points

[sānto:] third class

[tʰʌ]. Voiceless, alveolar stop. Unreleased.

V \_\_\_\_\_ t, ts, tʃ

[katʰta] bought

[tsotʰtsa] father

[dotʰtʃi] which

V \_\_\_\_\_ #

[kitʰ]. cut

[inabikatʰ]. lightning

[otʰ]. I

[netʰ]. fever

[kusutʰ]. medicine

[tʰ]

Environment

Example

V\_\_\_\_\_s

[akutʰci] next day

[katʰci:to] person who writes

V\_\_\_\_\_h

[katʰhaimutʰ] to begin writing

V\_\_\_\_\_

[ci:ʰni] seven people

V\_\_\_\_\_m

[tatʰmõ] firewood

[ukutʰmire] try to receive

V\_\_\_\_\_f

[katʰsimota] finished writing

V\_\_\_\_\_V

[okutʰotʰ] is sending

[ts] Voiceless, alveolar affricate

#\_\_\_\_\_u,o,ũ,õ

[tsutʰ] moon

[tsotʰtsa] father

V\_\_\_\_\_u,a,o,ũ,ã,õ

[sutsutʰ] to throw away

tʰ\_\_\_\_\_u,a,o,ũ,ã,õ

[mitʰtsu] three

[tsotʰtsa] father

[gotʰtso] feast

n\_\_\_\_\_u,a,

[õntsa] uncle

[kãntsutʰ] bite

[tʃ] Voiceless, prepalatal affricate

#\_\_\_\_\_i,u,a,o

[tʃikara] strength

[tʃu:goku] the Chūgoku area

[tʃãwã] rice bowl

[tʃõndokol] toilet

[tʃ]

Environment

Example

V\_\_\_\_\_i,a,o

[tsutʃi]	earth
[ka:tʃotʔ]	is writing
[ko:tʃa]	black tea

tʔ\_\_\_\_\_i,a,o

[dotʔtʃi]	which
[itʔtʃaku]	one set (of clothes)
[itʔtʃo]	one portion (of food)

n\_\_\_\_\_i,u,a,o

[sɛntʃa]	green tea
[bãntʃi]	lot number
[mãntʃo:]	high tide
[mãntʃu:]	Manchuria

[k] Voiceless, mediovelar stop

#\_\_\_\_\_u,e,o,a

[kutʔ]	mouth
[karagi]	crow
[kɛŋka]	quarrel
[koe]	voice

V\_\_\_\_\_u,e,o,a

[daiku]	carpenter
[muçiko]	son
[ukutʔ]	to receive
[neko]	cat
[koko]	here
[akatsutʔ]	dawn

[k]			
Environment		Example	
k? _____ a		[ok?kakut?]	to chase after
		[nek?ku]	root
n _____ a		[mŋkaçika]	difficult
[k?]	Voiceless medio-velar stop.	Unreleased	
V _____ k		[ok?kakut?]	to chase after
		[çik?kja:çi]	to extinguish
[k]	Voiceless pre-velar stop <sup>10</sup>		
# _____ i, i̥, ī, j		[ki̥u]	yesterday
		[kita]	north
		[kju:]	today
		[kja:]	shell
V _____ i, j		[aki]	autumn
		[okjo:]	sutra
k? _____ i, j		[sak?ki]	before
		[çik?kja:çi]	to extinguish
n _____ i, j		[tan̄kit?]	spittle
		[f̄ŋkjo]	election

10: With the velar stops [k] and [g] the 'palatalized' segments are fronted.

See Wenck, Günther, *Japanische Phonetik*, Wiesbaden 1954, I, 58

[ɸ] Voiceless, bilabial fricative

Environment	Example	
# _____ u, u <sup>11</sup>	[ɸutʔ]	to wave
	[ɸutoka]	big
[s] Voiceless, alveolar fricative		
# _____ u, u, o, a	[sugaja]	ant
	[sukʔkakʔka]	light
	[soto]	outside
	[sadʔdõ]	monkey
V _____ u, u, o, a	[misatʔ]	cape
	[kusutʔ]	medicine
	[heso]	navel
	[kosutʔ]	to rub
	[hasã]	scissors
s _____ o, a	[issotʔ]	one pair
	[okjassã]	guest
n _____ u, o, a	[kãnsa:]	god
	[fẽnsõ:]	war
	[fẽnsu]	folding fan

---

11 The voiceless bilabial fricative varies freely with [h]. [ɸ] occurs only word initial before [u] and [u]. It is probable that it also occurs medially in the speech of most dialect speakers in the standard language borrowings such as nōfu (farmer) and sanfujinka (obstetrics).

## [f] Voiceless, prepalatal fricative

## Environment

## Example

#i,u,e,o,a,ĩ,ũ,ẽ,õ,ã

[fibʰbita] buttocks

[fu:me] sparrow

[fetʰ]. cicada

[fõngatʰ]. New Year

[fa:dʒa] turn shell

V\_\_\_\_i,u,e,o,a

[afe] sweat

[ja:fa:] vegetables

[so:fitʰ] funeral

[dʒi:fiŋ] earthquake

f\_\_\_\_a,o,i

[çi:ʃakutʰ] to tear

[tsu:ʃatʰ]. to pierce

[çipʰpa:ʃatʰ]. to tear open

[i:ʃoni] together

[i:ʃu:] one week

[mi:ʃio] high tide

tʰ\_\_\_\_V

[katʰʃimota] finished writing

n\_\_\_\_V

[sã:ʃu:] three weeks

## [ç] Voiceless, medio-palatal fricative

#\_\_\_\_i,i̇,a,o

[çigaç̣i] east

[çitotʰ]. one

[çatʰ]. one hundred

V\_\_\_\_i,a

[toçibaɛ] old person

[muçime] daughter

[çiçat] two hundred



Environment	Example	
	[ç̥im̥meci]	lunch
	[ç̥igaci]	east
t' _____ i	[akut'ç̥i]	next day
[h]      Voiceless, glottal fricative. Varies freely with [x]		
# _____ e,o,a	[heta]	unskilled
	[hogeměndzu]	hole
	[hajaka]	fast
[x]      Voiceless, mediovelar fricative. Varies freely with [h]		
# _____ e,o,a	[xeta]	unskilled
	[xogeměndzu]	hole
	[xajaka]	fast
[b]      Voiced, bilabial stop		
# _____ u,e,o,a,ě,õ,ã	[butagoja]	pig sty
	[beběňko]	calf
	[běnto]	lunch box
	[bot'to]	stick
	[bãn]	elder brother
V _____ u,e,o,a	[tsubuçi]	knee
	[nabe]	pan
	[tsubo]	jar
	[fibat'to]	bind

[b]

Environment

Example

b<sup>ʔ</sup> \_\_\_\_\_ a, o[ab<sup>ʔ</sup>ba] oil[ʃib<sup>ʔ</sup>bo] tail

m \_\_\_\_\_ u, o, a

[jẽmba] dragonfly

[tsũmbo] deaf

[ãmbune] net boat

[b] Voiced, bilabial stop. Palatalized

# \_\_\_\_\_ i, ĩ, j

[bĩntãŋ] cheek

[bja:] large conch shell

[bjot<sup>ʔ</sup>] sickness

V \_\_\_\_\_ i, j

[i bit<sup>ʔ</sup>] rice chest

[sãmbjo:] three seconds

b<sup>ʔ</sup> \_\_\_\_\_ i, j,[ʃib<sup>ʔ</sup>bita] buttocks

m \_\_\_\_\_ j

[ʃĩmbja] worry

[b<sup>ʔ</sup>] Voiced, bilabial stop. Unreleased.

V \_\_\_\_\_ b

[ab<sup>ʔ</sup>ba] oil[ʃib<sup>ʔ</sup>bita] buttocks[tab<sup>ʔ</sup>basut<sup>ʔ</sup>] make a journey

[d] Voiced, alveolar stop.

# \_\_\_\_\_ e, a, o

[dekut<sup>ʔ</sup>] to be done

[damaç̣i] cheat

[dot<sup>ʔ</sup>] which

[d]

Environment

Example

V\_\_\_\_\_e,a,o

[ude] arm

[d<sub>ʒ</sub>ida] ground

[kadotʔ] corner

dʔ\_\_\_\_\_a,o

[madʔda] pillow

[sadʔdõŋ] monkey

n\_\_\_\_\_e,a,o

[nõnde] drinking

[nãnda] tear

[tʃõndoko] toilet

[d]

#\_\_\_\_\_j

[dʒadʔdõŋ] carpenter

[dz] Voiced, alveolar affricate. Varies freely with voiced alveolar fricative [z] except after #.

#\_\_\_\_\_u,a,o

[dzubõŋ] trousers

[dzo:kĩŋ] rag

V\_\_\_\_\_u,a,o,ũ,ã,õ

[iredzũŋ] tattoo

[kadza] odour

[kadzotʔ] family

n\_\_\_\_\_u,a,o

[xogemẽndzu] hole

[gĩndza] the Ginza

[fĩndzo] heart

[d<sub>ʒ</sub>] Voiced, prepalatal affricate.

#\_\_\_\_\_i,e,a,u,o,ĩ,ẽ,ã,ũ,õ

[d<sub>ʒ</sub>ĩndzi] grandfather[d<sub>ʒ</sub>ida] ground[d<sub>ʒ</sub>ẽŋ] money

[dʒ]

Environment	Example	
	[dʒa]	is, equals
	[dʒu:itʔ]	eleven
	[dʒo:ho:]	both
V_____V	[meidʒo]	niece
	[kadʒe]	wind
	[jomedʒo]	bride
	[nidʒi]	rainbow
dʔ_____u,a	[rodʔdʒu]	sixty
	[ʒidʔdʒu]	seventy
	[jodʔdʒa]	four people
n_____V	[sãndʒu]	thirty
	[kãndʒi]	Chinese character

[z] Voiced alveolar fricative. Varies freely with [dʒ] in all positions in which [z] occurs.

V_____u,o,a	[ʔirezũ]	tattoo
	[kaza]	odour
	[kazotʔ]	family

[ʒ] Voiced prepalatal fricative. Varies with [dʒ] in all environments.<sup>12</sup>

[g] Voiced mediovelar stop.

#_____u,e,o,a	[gu:]	dumb
	[gẽŋki]	vigour
	[gokedʒo]	widow
	[gãŋkutʔ]	neck

<sup>12</sup> In the speech of the Ohama informants [ʒ] is a rare free variant form occurring in morphemes which normally have [dʒ]. Shibata reports a contrast of [dʒ] [ʒ] in the Kamiōzu dialect of Fukue. This may be a dialect difference between Kamiōzu and Ohama or may be an idelect difference discerned in older informants. See N.H.K. *Zenkoku Hōgen Shiryō* IX, 16.

[g]	Environment Example	
V_____u,e,o,a	[çige]	beard
	[sugaja]	ant
	[kega]	wound
	[susogo]	last child
	[m:mago]	grandchild
g?_____a	[ ig?gane]	ring
ŋ_____a	[çĩngara]	squint
[g] Voiced pre-velar stop.		
#_____i,i,j	[girigiri]	barely
	[gĩnza]	the Ginza
	[gju:nju:]	cow's milk
[r] Voiced alveolar flap.		
#_____u,e,o,a	[rusu]	absence
	[rẽnga]	brick
	[rot?]	six
V_____u,e,o,a	[firuçi]	sign
	[jogore]	dirt
	[ uçirol]	behind
	[mura]	village
n_____o	[dãnrol]	hearth
[r] Voiced alveolar flap. Palatalized.		
#_____i,j	[rip?pa]	fine
	[rjãněp]	next year
n_____i	[kãnri]	supervision

[r]		
Environment	Example	
n _____ i	[rjãñẽr]	next year
	[kãñri]	supervision
[m]	Voiced bilabial nasal stop.	
# _____ u, e, o, a, ũ, ẽ, õ, ǣ	[muçime]	daughter
	[mẽntama]	eye
	[mõr]	person
	[mae]	front
V _____ u, e, o, a, ũ, ẽ, õ, ǣ	[kimõr]	clothes
	[kuma]	bear
	[kemutʔ]	smoke
	[kome]	rice
	[mame]	bean
m: _____ a	[kũm:ma]	cart
	[kõm:maka]	small
	[m:maka]	delicious
	[m:marutʔ]	to be born
tʔ _____ o	[hatʔmõr]	footwear
[m:]	Voiced bilabial nasal stop. Lengthened.	
# _____ m	[m:maka]	delicious
V _____ m	[kũm:ma]	cart
[m]	Voiced bilabial nasal stop. Palatalized.	
# _____ i, ĩ, j	[minãr]	south
	[mĩã] <sup>13</sup>	water

13. This sequence of segments also means 'right' and 'ear'. A dialect sentence volunteered by most Gotō informants as evidence of the difficulty of the dialect was [mĩno mĩni#mĩnoçate ↗ mĩnomĩno'itaka↘] *water got into my right ear and it hurts.*

[m]

Environment

Example

# \_\_\_\_\_ i, i', j

[mja:nitʰ]

every day

[n]      Voiced alveolar nasal stop.

# \_\_\_\_\_ u, e, o, a, ũ, ě, ǒ, ǎ

[nutʰ]

extract

[nemutʰ]

to sleep

[notʰ]

to ride

[nǎŋ]

wave

V \_\_\_\_\_ u, e, o, a

[kine]

pestle

[minǎŋ]

south

[mune]

chest

[xone]

bone

V \_\_\_\_\_ t, ts, tʃ, d, dz, d̥, n, ɲ, s, z,  
ʃ, r, r', j

[mǎntama]

eye

[ǒntsa]

uncle

[mǎntʃu:]

Manchuria

[mǎndʒu:]

vagina

[kǐnnaka]

yellow

[çǐnnitʰ]

to take off

[ʃǎnso:]

war

[ʃǎnʃei]

teacher

[xogemǎndzu]

hole

[gǐnza]

the Ginza

[dǎnro]

hearth

[kǎnri]

supervision

[ʃǐnju:]

good friend

[n]

tʰ \_\_\_\_\_ V

[kotʰnokadzɛ]

east wind

n \_\_\_\_\_ V

[kǐnnaka]

yellow

[ŋ] Voiced alveolar nasal stop. Velarized.

Environment

Example

V _____ V	[hǎŋǝi] <sup>14</sup>	prosperity
~ V _____ #	[mǐŋ]	water
	[jasǔŋ]	to rest
	[ʔisǝŋ]	hurry
	[ʔipʔpǝŋ]	once
	[hǎŋ]	to skin

[ŋ] Voiced prevelar nasal stop.

ʔ _____ k, g	[ʃǝŋgatʔ]	New Year
	[kǎŋge]	hair
	[kǝŋka]	quarrel
	[gǎŋkutʔ]	neck

[n] Voiced alveolar nasal stop. Palatalized.

# _____ i, j	[niçi]	west
	[nja:nja]	younger sister (dimin.)
tʔ _____ V, j	[çitʔniçi]	seven people
n _____ i, j	[cǐnnitʔ]	take off

[j] Non-syllabic, front vowel.

# _____ u, e, o, a, ũ, ɛ, ɔ	[jutʔ]	snow
	[jǝmbi]	prawn
	[jotʔ]	axe
	[jaʃa:]	vegetable

<sup>14</sup> The velarized nasal occurring before a vowel segment is usually accompanied by a slight front glide. [hǎnjǝi] *prosperity*.



Environment	Example	
V <u>      </u> u,o,a	[ɕuju]	winter
	[mabajaçika]	dazzling
	[tsujoka]	strong
	[mojutʔ]	to burn
p,b,d,k,g,m,n <u>      </u> u,o,a,ũ,õ,ã	[pʃõmpjõg]	jumping
	[bjotʔ]	illness
	[djadʔdop]	carpenter
	[kju:]	today
	[gju:nju:]	cow's milk
	[nja:nja]	younger sister (dimin.)

[w] Non-syllabic back vowel.

# <u>      </u> a	[wakaçi]	to boil
V <u>      </u> a	[iwa]	rock
	[awa]	millet
	[owatʔ]	to end
	[suwatʔ]	to sit

#### 4.1.2. The Vowel Segments

The total number of distributions of each vowel is too great to show in tabular form. The more frequent environments are shown in terms of general categories. Only actual limitations on the occurrence of vowels as seen in the Ohama corpus are shown in detail.

[i] The high front vowel.

Environment	Example	
# <u>      </u> C	[ibitʔ]	rice chest

Environment	Example	
$b, t, f, d_3, s, k, g, ʒ, m, n$ _____ C	[tsutʃi]	earth
	[d_3iʃiŋ]	earthquake
	[ʃibʔbita]	buttocks
	[kinju]	yesterday
	[giriɡiri]	barely
	[minãŋ]	south
	[rotʔnfiŋ]	six people
	[çige]	beard
$k, ʒ, t, s, d_3$ _____ #	[aki]	autumn
	[akutʔçi]	following day
	[kotʔtʃi]	this one
	[d_3i]	character
C _____ a	[ʃiasatʔte]	the day after tomorrow
u: _____ C	[d_3u:itʔ]	eleven
e, o, a _____ C	[meid_3o]	niece
	[oid_3ŋ]	nephew
	[xaimutʔ]	to begin
[i]	The high front vowel.	Devoiced.

Environment	Example	
$ʒ$ _____ #, pʔ, t, k, kʔ, n, m, r	[çim̩meçi]	lunch
	[çipʔpaʃʃatʔ]	to tear
	[çitotʔ]	one person
	[muçiko]	son
	[çikʔk_3ŋ]	to pull in
	[toçinobãŋ]	New Year's eve
	[muçime]	daughter
	[waçirutʔ]	to forget

Environment	Example	
ts_____k	[tʃikaka]	close
k_____t	[kita]	north
[i] The high front vowel.	Nasalized.	
#_____n	[in̩]	dog
p, b, ts, s, d, k, g, m, n, ɕ_____w	[min̩]	water
	[tʃin̩]	to pour
	[sãnnin̩]	three people
b, b, ts, s, d, k, g, m, n, ɕ_____n, ŋ, m	[tʃimpo]	penis
	[ʃimbja:]	worry
	[bĩntaŋ]	cheek
	[kĩngjo]	goldfish
[u] The high back vowel.		
#_____C	[usãŋ]	rabbit
	[unãŋ]	eel
	[ude]	arm
	[uɕi]	cow
	[utʔ]	sell
b, ts, tʃ, dʒ, k, g, ɸ, s, ʃ, z, ʒ, m, n, r, j_____C, #	[butsu]	foam
	[tsuboka:]	well
	[tʃu:tʃu]	butterfly
	[dzubõŋ]	trousers
	[cidʔdʒu]	seventy
	[kutʔ]	mouth
	[ɕinagure]	evening
	[ɸutʔ]	to wave
	[sugaja]	ant
	[xogemẽnzʉ]	hole

Environment	Example	
	[namutʔ].	to lick
	[manutʔ].	imitate
	[narutʔ].	to learn
	[ɸuju]	winter
#,C <sup>(as above)</sup> _____e	[ue]	above
	[tsue]	staff
[u:]      The long high back vowel.		
ʈ,ɖ,ʑ,k,g,s,n,j _____C,#	[ʈʈu:ʈʈu]	butterfly
	[ɖɖu:itʔ].	eleven
	[ku:ɖɖu]	ninety
	[gu:]	dumb
	[su:]	to suck
	[nu:]	to sew
	[ju:]	to say
	[kju:]	today
C _____i	[ɖɖu:itʔ].	eleven
[u̥]      The high back vowel. Devoiced.		
ɸ,ʈs,s,k _____t,ʈf,k,kʔ,s	[ɸutʈatʔ].	two
	[ɸutʈʈatʔ].	two people
	[ʈsukutʔ].	to make
	[sukʔkʈkʔka]	light
	[kusaka]	smelly

[ʊ] The high back vowel. Nasalized.

Environment	Example	
# _____ <sub>n</sub>	[ʊ̃]	sea
(as for [u])		
C _____	[kʰʊ̃]	nail
	[sʰʊ̃]	charcoal
	[iredzʰʊ̃]	tattoo
(as for [u])		
C _____ <sub>m,n,ŋ</sub>	[tsʊ̃mbo]	deaf
	[sʰʊ̃nka]	(is it) charcoal?

[e] The mid front vowel.

b, t, d, dʒ, k, g, f, h, r, m, n, j _____ <sub>C#</sub>	[tetʔ]	to shine
	[heta]	unskilled
	[ʃetʔ]	cicada
	[sake]	rice wine
	[bebɛ̃ŋko]	calf
	[dekutʔ]	to be done
	[dʒɛ̃mbu]	all
	[gɛ̃ŋki]	vigour
	[kadʒe]	wind
	[jogore]	dirt
	[mɛ̃ntama]	eye
	[kine]	pestle
	[jɛ̃mbi]	prawn
C _____ <sub>i</sub>	[meidʒo]	niece
C _____ <sub>a</sub>	[dea:]	to meet
o _____ <sub>#,C</sub>	[koe]	voice
	[koesutʔ]	a voice (is heard)

[e]

Environment

Example

u \_\_\_\_\_ #

[ue]

above

[ẽ] The mid front vowel.

Nasalized.

C (as for [e])

\_\_\_\_\_ n

[dʒẽn]

money

[fẽn]

thousand

[ipʔpẽn]

once

(as for [e])

C \_\_\_\_\_ m, n, ŋ

[dʒẽmbu]

all

[mẽntama]

eye

[bebẽnko]

calf

[o] The mid back vowel.

# \_\_\_\_\_ C (b, t, tʔ, d, tʃ, k, kʔ, g, ŋ, n, j) [ obojutʔ]

to remember

[otoko]

man

[otʔtʃajutʔ]

to fall

[odotʔ]

to dance

[otʃa]

tea

[okaçil]

cake

[okitʔ]

to get up

[okʔku]

inside

[ogotʔ]

to scold

[oçika]

late

[onago]

woman

[oja]

parent

b, t, ts, tʃ, s, dz, dʒ, ʒ  
k, g, m, n, r, j \_\_\_\_\_ C, #

[botʔto]

stick

[doke:]

where to?

[kotʔ]

this

[onago]

woman

[o]

Environment

Example

b,t,ts,tf,d,dz,dʒ,

k,g,m,n,r,j \_\_\_\_\_C,#

[usol]

lie

[fʰɛndzo]

ancestor

[modotʰ]

to return

[notʰ]

paste

[rotʰnʰn]

six people

[xone]

bone

[jotʰ]

axe

[tsotʰtsa:]

father

[o]

# \_\_\_\_\_i

[oidʰn]

nephew

C \_\_\_\_\_e

[koe]

voice

[o:] Long mid back vowel.

t,tf,j \_\_\_\_\_#

[to:]

ten

[tʰo:]

intestine

[jo:]

to get drunk

g,n \_\_\_\_\_C

[go:dʒu]

fifty

[no:do]

throat

[ɔ̃] Mid back vowel. Nasalized.

# \_\_\_\_\_n

[ʰntsɑ]

uncle

C \_\_\_\_\_n

[dʰn]

tools

[ku:mʰn]

food

[a] Low vowel.

# \_\_\_\_\_C

[asa]

morning

[ato]

remains

[aʒita]

tomorrow

[a]		
Environment :	Example	
# _____ C	[abʔba]	oil
	[atsuka]	thick
	[akka]	hot
	[amajutʔ]	to take advantage
	[aga]	you
C _____# (-p, b, k, g, m, n, ŋ, r)	[abʔba]	oil
	[çita]	under
	[tsotʔtsa]	father
	[otʃa]	tea
	[idʔda]	how much
	[jodʔdʒa]	four people
	[kaka]	mother
	[tʃikara]	strength
	[ima]	now
	[otona]	adult
	[iwa]	rock
C _____# (-p, b, k, g, m, n, ŋ, r)	(- , nC, mC, ŋC)	
	[ataraçika]	new
	[kusatʔ]	to rot
	[tsotʔtsabajõn]	to call father
	[tsuffatʔ]	to poke
	[tamagatʔ]	be surprised
C _____i, o	[xaimutʔ]	to begin
	[kaika]	itchy
	[aoka]	blue
	[aotʔ]	abalone



[a]		
Environment	Example	
i _____ C	[ʃiasatʔte]	day after tomorrow
[a:] Long low vowel.		
C _____ C	[sa:ka]	cold
	[dʒa:ka]	dirty
	[ma:tʔ]	surroundings
	[ja:raka]	soft
	[rja:nɛŋ]	next year
C _____ #	[na:]	rope
	[uta:]	sing
	[ka:]	river
	[tʃiga:]	to differ
	[nuga:]	to wipe
	[xa:]	to crawl
	[kja:]	shell
	[ɕa:]	fly
V _____ #	[dea:]	to meet
[ã] Low vowel, Nasalized.		
# _____	[ãŋ]	to weave
C _____	[minãŋ]	south
C, ? _____ m, n, ŋ	[ãmbune]	net boat
	[nãnda]	tear
	[kãnge]	hair

4.1.3. The fifty-two segments recognised in the Ohama dialect of Fukue city are summarized in the following diagram.

Point of Articulation  Mode of Articulation								
	Labial	Labial Palatalized	Alveolar	Palatalized	Prepalatal	Prevelar (front)	Mediovelar (back)	Glottal
Stops, Voiceless	p	p	t			k	k	
Voiced	b	b	d	d		g	g	ʔ
Unreleased Stops.								
Voiceless	pʔ		tʔ				kʔ	
Voiced	bʔ		dʔ				gʔ	
Affricates. Voiceless			ts		tʃ			
Voiced			dz		dʒ			
Fricatives. Voiceless	ɸ		s		ʃ	ç	x	h
Voiced			z					
Nasal Stops.	m	m	n	n		ɲ	ŋ	
Flaps			r	r				
Non-syllabic vowels. <sup>15</sup>						j	w	
High vowels.						i ī	u ũ	
High vowels. Devoiced						i̥	u̥	
Mid vowels						e ě	o ǔ	
Low vowels							a ǣ	

THE SEGMENTS OF THE OHAMA DIALECT FUKUE CITY

<sup>15</sup> For the purposes of this chart the long vowels (i:,u: etc) are treated as sequences of two short vowels and are not listed separately.

## 4.2. Grouping of segments into phonemes.

## 4.2.1. Complementary distribution.

The segments can, for the most part be grouped into phonemes on the grounds of complementary distribution and phonetic similarity.

The palatalized segments which occur only before [i] and [j] and the non-palatalized segments which occur only elsewhere stand in complementary distribution. The mediovelar stops have fronted, prevelar complements which occur only before [i] and [j]. The palatalized (the term is here used to cover the prevelar stops also) stops are in complementary distribution with their phonetically similar counterparts, but are in contrasting distribution with each other. The requirement that all members of a single phoneme share common phonetic qualities ensures that [p] and [k] are not grouped into the phoneme /p/. The palatalized and non-palatalized sets fall into the following six phonemes.

[p]	[p]	/p/	Voiceless labial stops
[b]	[b]	/b/	Voiced labial stops
[d]	[d]	/d/	Voiced alveolar stops
[g]	[g]	/g/	Voiced mediovelar stops
[m]	[m]	/m/	Labial nasal stops
[n]	[n]	/n/	Alveolar nasal stops
[r]	[r]	/r/	Flaps

The unreleased segments, [pʔ] [bʔ] [dʔ] [kʔ] [gʔ] are in complementary distribution with each other and with the phonetically similar released stops. They are included into the tentative phonemes /p/ /b/ /d/ /k/ and /g/. [tʔ] on the other hand, while standing in complementary distribution with the other unreleased stop

segments, contrasts with the released segments, as both may occur in the environment V\_\_\_\_V, e.g. [ukutʔot] (is receiving) and [çitotʔ] (one). It is still possible to include [tʔ] in /t/ by introducing the open juncture /+/ to distinguish /ukut+ot/ from /hitot/.<sup>16</sup> However, the tentative phoneme /t/ with [tʔ] included would have a unique distribution quite different from that of its corresponding voiced phoneme /d/. A solution in accord with the demands of patterning, in which all stops have a similar distribution, is to include the unreleased segments into a single phoneme /ʔ/, the members of which share the quality of glottalization. The phonetic nature of /ʔ/ is determined by the quality of the following phoneme. Where a stop follows, /ʔ/ takes its point of articulation and voice or voicelessness from that stop.

i.e. /ʔ/

Cʔ in the environment V\_\_\_\_C

Cʔ<sub>1</sub> in the environment V\_\_\_\_C<sub>1</sub>

Where /ʔ/ occurs in the environment V\_\_\_\_V or V\_\_\_\_#. it is realized as [tʔ].<sup>17</sup>

The alveolar and prepalatal fricative segments [s] and [ʃ] occur in overlapping distribution. That is to say they contrast

<sup>16</sup> For the analysis of [ç] into /h/ see

<sup>17</sup> Shibata in his analysis of the Kamiōzu dialect of Fukue city reports the utterance final stop segment as [ʔ]. In the Ohama material the auditory effect of the stop in V\_\_\_\_# seems to indicate alveolar articulation before, or adjunct to, the glottalization. *Zenkoku Hōgen Shiryō*, IX p.17.

in the environments n\_\_\_\_V and V\_\_\_\_V, but are in complementary distribution in V\_\_\_\_C. The inclusion of the unreleased stops into /ʔ/ means that all other consonant phonemes<sup>18</sup> no longer occur in the environment V\_\_\_\_C. Nevertheless, it is not possible to include the segments [s] and [ʃ] in /ʔ/ as they lack the quality of glottalization (i.e. are not unreleased) and there seems to be evidence that in the speech of Nakagawa Kazuo that [ʃ] at least contrasts with /ʔ/.

[itʔsimota]	/'iʔsimota/	went off
[iʃʃoni]	/'iʃʃoni/	together

The fricative segments [ɸ], [ç], and [h] occur in complementary distribution and share qualities of voicelessness and friction. These qualities, however, are also shared by the alveolar and prepalatal fricatives [s] and [ʃ] which occur in contrast to one another and the other fricative segments. Bloch suggests that [ɸ] and [h] can be included in a single phoneme /h/ with qualities labial or glottal (i.e. non-lingual fricatives).<sup>19</sup> [ç] and [h] are in overlapping distribution, with only [ç] occurring before [i] and only [h] (or its free variant [x]) occurring before [e] but contrasting before

<sup>18</sup> With the exception of [m], [n] and [ŋ]. See p.197.

<sup>19</sup> In Bloch's analysis of Tokyo speech [ç] (Bloch's notation has x) contrasts with [ɸ] (Bloch f) /xtocu/ (one) /ftóru/ (get fat) so is not included in /h/. For the validity of recognising disjunctive qualities in phonemic analysis, see Bloch. *op.cit.* p.107



It makes for a neater analysis if the distribution of the voiced/voiceless pairs of phonemes is the same. Here /t/ and /d/ have the same distribution. [ts], [dz] and [s], [z] also have identical distributions, but as [dz] and [z] are non-contrastive one should be eliminated. As [ʃ] and [dʒ] have the same distribution, they should perhaps be regarded as forming a pair of phonemes. As the voiceless prepalatal fricative [ʃ] pairs with the voiced prepalatal affricate, it is assumed that the voiceless alveolar fricative [s] pairs with the voiced alveolar affricate [dz] to form a voiceless/voiced pair. To avoid confusion with the voiceless affricate [ts] the voiced equivalent of /s/ is written /z/. Similarly the rare free variant [ʒ] of [dʒ] can be borrowed to represent the voiced phoneme /g/ to form a pair with /ʃ/. The alveolar and prepalatal phonemes are now /t/, /d/, /ts/, /tʃ/, /s/, /z/, /ʃ/, /ʒ/.

The nasal segments and their environments may be summarized as follows:-

m	n	ŋ	ɳ
#__V	#__V		
V__V	V__V		
Ṽ__m,p,b	Ṽ__n,t,d	Ṽ__n,k,g	Ṽ__#

The segments are in overlapping distribution. [m] and [n] contrast before vowels, but are in complementary distribution with one another and with the other nasal segments before C. Similarly [ɳ] occurs only before # and is in non-contrastive distribution with all other nasal stops. It is possible, therefore, to group [ɳ] and [ŋ] into a single phoneme, say /N/. If [ŋ] is to be the member of /N/ which occurs in the environment V\_\_n,k,g, the preconsonantal [n] which occurs before only alveolar or prepalatal segments and [m] which occurs before only

labial segments can also be included in /N/. The problem is to find a point of phonetic similarity shared by all members of /N/, but not by /m/ and /n/. Perhaps /N/ might be termed the "prenasalized" nasal phoneme<sup>22</sup> to account for the fact that all its members are preceded by a nasalized vowel segment. It would then contrast with /m/ the labial nasal stops and /n/ the alveolar nasal stops.

### The vowels.

The nasalized vowel segments fall together with the five oral vowel segments on the grounds of complementary distribution. The nasalized segments occur only before /N/ the oral vowel segments only elsewhere. The voiceless high vowel [i̥] occurs in rapid speech between voiceless consonants or after voiceless consonants and before pause. After [ç], [i̥] also occurs before voiced consonants. In the Ohama corpus [i̥] occurs in the environment h\_\_\_\_/ ?,b,t,tʃ,m,n,r/ ; k\_\_\_\_/t/ ; tʃ\_\_\_\_/k/. In slow deliberate speech the oral segment [i] replaces [i̥].

The voiceless high back vowel [u̥] occurs in rapid speech between voiceless consonants. In the Ohama material [u̥] occurs in, h\_\_\_\_/t,tʃ,k,?/ ; ts\_\_\_\_/ʃ,k/ ; s\_\_\_\_/k,?/.

The devoicing of other vowel segments was not detected in the Ohama dialect.

<sup>22</sup> In the d<sub>3</sub>ige dialects of Fukue /N/ does not appear to be significantly longer than /n/ or /m/ and is pronounced as part of the preceding syllable. Except for [m:] in *to be born* /N/ is not syllabic. Fukue Ohama dialect seems to be a syllabeme dialect. Shibata "On'in", *Hōgengaku Gaisetsu*, p.141.



Vowel length and vowel sequences.

A vowel does not occur directly after pause, but is preceded by a glottal constriction allowing for the build up of air before the release of the vowel. For this reason the articulation of medial vowels differs somewhat from that of the so-called initial vowels. In the phonetic transcription given in 4.1. the glottal constriction occurring before initial vowels is omitted. The phonemic nature of the glottal restriction in standard Japanese is argued by Hattori who shows that its presence is necessary to explain contrasts such as those found in the minimal pairs [su:ri] *mathematics* and [su'uri] *vinegar seller*, [sato:ja] *sugar merchant* and [sato'oja] *foster parent*. According to Hattori all so-called vowel sequences (other than the long vowels) are in fact CVCV sequences with the glottal catch /'/.<sup>23</sup> /'/' is a short "catch" produced by incomplete glottal closure. In the Ohama material although no minimal pairs were discovered, there was a clearly perceptible difference between vowel sequences such as [tobaakere] *open the door* and long vowels such as [dʒa:ka] *dirty*. It is therefore proposed to follow Hattori's analysis and recognise the glottal phoneme /'/. An important difference, however, lies in the fact that in the Ohama dialect, vowel sequences other than the long vowels (geminate vowels) may occur with no intervening /'/', particularly in the diphthongs /oi/ and /ei/.

<sup>23</sup> Hattori Shiro. *Gengogaku no Hōhō*, p.360

<sup>24</sup> Another possibility is to set up a length phoneme /:/, as proposed by Kindaichi in *Nihongo On'in no Kenkyū*, p.142.

The new phoneme /ʔ/ contrasts with the glottal stop /ʔ/ which incorporates the unreleased stop segments. The phonetically long vowels are to be interpreted as vowel sequences.

The vowel segment [e] differs from the other vowel segments in that it does not occur with /ʔ/ after pause (i.e. # e does not occur), although it may occur with /ʔ/ elsewhere, e.g. /koʔe/ 'voice'. After #, [e] occurs with [j] instead, e.g. [#jemba#] 'dragonfly'. The sequence [je], however occurs only after #, [j] being confined elsewhere to occurrence before /u,o,a/. As [je] and [e] occur in complementary distribution both can be included in a single phoneme /e/. /e/ will have the allophone [je] in the environment #\_\_\_\_\_.

#### 4.2.2. Rephonemicization

The process of rephonemicization as described by Harris<sup>25</sup> is to reduce phonemes which occur in very restricted environments into sequences of other phonemes less restricted in distribution. In the case of the Ohama dialect this method makes it possible to reduce the tentative phoneme inventory by four phonemes and considerably broaden the distribution of others.

The alveolar and prepalatal stops, fricatives and affricates differ from all other consonant phonemes in that they do not occur before /j/. At the same time there is considerable overlap in the distribution of these phonemes. The distribution of these tentative phonemes before vowels is shown in the chart below.

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25 Harris. op.cit. chap.9.

1st \ 2nd	i	u	e	o	a
t			X	X	X
d			X	X	X
ts		X		X	X
tʃ	X	X		X	X
s		X		X	X
z		X		X	X
f	X	X	X	X	X
ʒ	X	X	X	X	X

X indicates the phoneme on the left occurs before the vowel above.

/ts/ and /tʃ/ are in contrasting distribution before /u,o,a/, but in complementary distribution before /i/.

/tʃ/ therefore, may be reinterpreted as a sequence of the phonemes /ts/ and /j/. /j/ however, does not occur before /i/ so the sequence [tʃi] analysed as /tsi/ with [tʃ] being the member of /ts/ occurring in the environment, \_\_\_i. /tʃ/ is now replaced by two phonemes /tsj/.

This rather clumsy transcription may be simplified by using the symbol c to represent the unit phoneme /ts/. [tʃ] then is a member of /c/ before /i/, and /cj/ elsewhere.

A similar process eliminates the phoneme /ʃ/. /s/ and /ʃ/ contrast before /u,o,a/, but are in complementary distribution before /i/ and /e/. Although /j/ does occur in the environment #\_\_\_e, it does not occur in C\_\_\_e. Consequently /ʃe/ cannot be analysed as /sje/ but as /se/. [ʃ] is the member of /s/ occurring before /i/ and /e/. In the same way

/z/ is eliminated and reassigned to /z/ and /j/, and /ç/ becomes /hj/.

This step has eliminated four phonemes and widened the distribution of /j/ so that it now occurs after all consonants except /t/ and /d/.

#### 4.2.3. The segmental phonemes

The segmental phonemes of the Ohama dialect are /p,t,c,k,b,d,g,s,h,r,m,n/ the consonants, known as C:/N,?/, the syllable final phonemes :/j,w/ the non-syllabic vowels, known as S: /#/ the pause phoneme and /i,u,e,o,a/ the vowels, known as V.

C occurs after #, V, N and before /a,o,e/. All C except /t,d/ occur before /j/, V. /s/ also occurs after /s/. /N,?/ occurs after V and before C. /j/ occurs after C (except /t,d/) and before /a,o,u/. V occurs after # and before /C,N,#/. /e,o,a/ occur after C. /u,o,a/ occur after /j/. /a/ occurs after /w/. /i,u/ occur after /p,c,k,b,g,s,z,r,m,n,h/.

The phonemes with their distinctive features and allophones are given below.

# The pause phoneme

/p/ the voiceless labial stops.

[p] before /i/, and /j/.

[p] elsewhere.

/b/ the voiced labial stops.

[b] before /i/ and /j/

[b] elsewhere

/t/ the voiceless alveolar stops.

[t] before /u/, /o/ and /a/.

/d/ the voiced alveolar stops.

[d] before /u/, /o/ and /a/.

/c/ the voiceless alveolar affricates.

[tʃ] before /i/.

[ts] before /u/, /o/ and /a/.

/cj/ is [tʃ].

/k/ the voiceless dorsal stops.

[k̚] before /i/ and /j/.

[k] elsewhere

/g/ the voiced dorsal stops.

[g̚] before /i/ and /j/

[g] elsewhere

/s/ the voiceless alveolar fricatives.

[s̚] before /i/ and /e/

/sj/ is [s̚]

[s] elsewhere

/z/ the voiced alveolar fricatives. [dz] after [#]. [dz]

varies with the less common [z] in the environment C \_\_\_ a, o, u.

[d̥z̥] or its rare variant [z̥] before /i/ and /e/. Elsewhere

[d̥z̥] is /zj/.

/r/ the alveolar flaps.

/r/ before /i/ and /j/ [r̥] elsewhere.

/m/ the labial nasal stops.

[m̚] before /i/ and /j/ [m] elsewhere

/n/ the alveolar nasal stops.

[n̚] before /i/ and /j/ [n] elsewhere

/h/ the non-lingual fricatives

[ɸ] before /u/, [ç] before /i/ (elsewhere [ç] is /hj/) and

[x] varies with [h] before /e/, /o/ and /a/.

[ʔ] the glottal catch.

Glottal constriction accompanying articulation of vowels.

/ʔ/ the glottalized stops.

[pʔ] before /p/

[bʔ] before /b/

[dʔ] before /d/

[gʔ] before /g/

[tʔ] elsewhere.

/N/ the syllable final nasals.

[ŋ] before #, V, [j] [w]

[n] before /t, c, d, s, z, r, n/

[m] before /p, b, m/

[ŋ] before /k/ and /g/.

/j/ the non-syllabic front vowel.

[j] before /u, o, a/.

/w/ the non-syllabic back vowel

[w] before /a/

/i/ the high front vowels.

[i̥] after /h/ or between voiceless consonants

[i] before /N/

[i] elsewhere

/u/ the high back vowels.

[u̥] in the environments /h\_\_\_\_\_t, c, k, ʔ/; /c\_\_\_\_\_s, k/; /s\_\_\_\_\_k, ʔ/

[ū] before /N/

[u] elsewhere

/e/ the mid front vowels.

[je] after #

[ẽ] before /N/

[e] elsewhere

/o/ the mid back vowels.

[õ] before /N/

[o] elsewhere

/a/ the low vowels.

[ã] before /N/

[a] elsewhere

#### 4.3. Syllables

The consonant and vowel phonemes combine to form syllables.

The staccato effect produced by the equal time unit of the mora found in most Japanese dialects is lacking in the *dzige* dialects of the Gotō Archipelago. The occurrence of closed syllables as free forms is a characteristic the Gotō dialects share with Kagoshima speech.

While it may perhaps be possible to analyse the /N/ occurring in the environment \_\_\_\_\_# as syllabic, it is difficult to see how this analysis could be applied to /ʔ/ occurring in the same position.<sup>26</sup>

Final /ʔ/ clearly belongs to the syllable of the preceding vowel.

The syllable types then are:- CV, CSV, CVʔ, CVN, CSVʔ, CSVN which may occur as free forms and N, V AND Vʔ which always combine with another

syllable to form a word. The syllables have a peak represented by one of the five vowel phonemes (or /N/) and margins represented by consonants.<sup>27</sup> The phonemes /N/ and /ʔ/ always mark a syllable

border. Where two consonants occur in succession, the syllable

border falls between the two. A minimal syllable consists of an

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<sup>26</sup> The auditory effect with /N/ too is that if a short nasal pronounced as part of the preceding syllable. See 4.2.1. f.n.22.

<sup>27</sup> The terminology for the analysis of the syllable is that used by Charles F. Hockett in *A Manual of Phonology*, Indiana University Publications in Anthropology and Linguistics 11 (1955) and *A Course of Modern Linguistics*, (MacMillan, New York 1958) p.85. It is also that adopted by Eva Sivertsen in *Cockney Phonology* (Oslo University Press, 1960)

onset plus a peak or very rarely of the onset /N/ occurring alone.<sup>28</sup>

That part of a margin which precedes the peak is the onset, that part which follows a peak is the coda. Onsets are further divided into simple onsets consisting of a single consonant or non-syllabic vowel and complex onsets consisting of a consonant plus the front non-syllabic vowel /j/. The coda consists of /ʔ/, /N/ or /s/.

/ʔ/ and /N/ may occur in free forms /s/ only in bound syllables.

The following is a diagrammatic representation of the syllable of the Ohama dialect of Fukue city. Not all possible combinations actually occur in the material collected. It may be assumed however that all syllables occurring in the dialect fall into the chart given below.

ONSET		PEAK		CODA
p		i	i	
b		u	u	
k		e	e	ʔ
g		o	o	N
c		a	a	s
s				
z				
h				
r		ü	u	
m	j	o	o	
n		a	a	
t		e	e	
d		o	o	
d		a	a	
d	j	a	a	
w		a		

<sup>28</sup> The Fukue dialects fall into the onset-peak type compared with the peak type of English and the duration type of Tokyo Japanese. Hockett (1958) p.99-100



\_\_\_\_\_ Indicates a following syllable with onset /s/ or /sj/.

The peak may consist of a long vowel, i.e. a sequence of the same vowel.

Permissible combinations are indicated by a line which runs from left to right, but never crossing a horizontal line.<sup>29</sup>

The peak of the syllable is the unit bearing stress or intonation.<sup>30</sup> Generally speaking a breath group will have one or more vowels pronounced on a higher pitch and greater intensity than other vowels in the breath group. The particular vowel bearing the higher pitch and greater intensity varies according to emphasis or even differs from one speaker to another. A change in the position of high pitch and loud stress may alter the connotational meaning of an utterance, but will not change the lexical meaning.<sup>31</sup>

#### 4.3.1. Frequency of syllable peaks.

A statistical analysis of six hundred and eighteen forms in a list of lexical items revealed the following frequencies of vowel occurrence. The nasal vowel segments are included with the oral segments, but the occurrence of voiceless vowels is listed separately.

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<sup>29</sup> See Harris, op.cit. p.153

<sup>30</sup> See 4.4.0.

<sup>31</sup> Connotational meaning indicates intonation categories such as statement, question, imperative, doubt etc. at the utterance level. Lexical meanings are differences in the meaning of words. In Fukue [haçi] *chopsticks* and [haçi] *bridge* are homophones as with [hana] *nose* or *flower*; [ame] *sweet* or *rain*.

	i	u	e	o	a
Initial <sup>32</sup>	24	10	[je] 5	27	38
Medial (including Ṽ before /N/)	[i] 93	[u] 134	23	126	263
	[i̥] 31	[u̥] 13			
Final	[i] 11	[u] 21	42	41	119
	[i̥] 26				
Long	[i:] 3	[u:] 9	[e:] 2	[o:] 8	[a:] 30
Total	188	187	72	202	450

Expressed as percentages of the total vowel occurrence /a/ represents 41%, /o/ 19%, /i/ 17%, /u/ 17%, /e/ 6%. Of the 618 forms in the word list 249 or 40.29% had a closed final syllable (174 forms ending in /ʔ/ and 75 forms ending in /N/).

#### 4.3.2. Margin frequencies.

**Simple onsets.** Of the simple onsets /k/ which occurs 244 times or 22.87% of the total occurrence of onsets in the list of 618 items is by far the most numerous. The frequencies of the onsets in descending order are:- /k/ 244 (22.87%), /h/ 132 (12.42%), /m/ 110 (10.30%), /n/ 99 (9.28%), /t/ (7.96%), /s/ 81 (7.59%), /r/ 57 (5.34%), /j/ 51 (4.78%), /g/ 45 (4.21%), /c/ 44 (4.12%), /d/ 41 (3.84%), /b/ 33 (3.09%), /z/ 26 (2.43%), /w/ 15 (1.40%), /p/ 4 (0.37%).

**Complex onsets.** Not all the possible complex onsets occur in the material statistically analysed. /t/ /j/ and /w/ do not occur as the first member of a complex onset anywhere in the material gathered for the Ohama dialect and /d/ occurs as the first member of a complex onset in only one morpheme /djaʔdoN/ [ɗjadʔdõn] *carpenter*, which is not included in the 618 item word list analysed here.

<sup>32</sup> i.e. occurring after /ʔ/.

Although /pj/ and /gj/ occur in a few morphemes such as /pjoNpjoN/ *jumping*, /horagjaa/ *large conch shell*, they did not occur in the word list. Of the fifty four complex onsets recorded, the relative frequencies were as follows:- /zj/ 17 examples representing 31.45% of the total occurrence of complex onsets. /cj/ 12 (22.20%), /sj/ 9 (16.65%), /kj/ 6 (11.10%), /hj/ 6 (11.10%), /bj/ 1 (1.85%), /mj/ 1 (1.85%), /nj/ 1 (1.85%), /rj/ 1 (1.85%).

Codas.

Only three phonemes /ʔ, N and s/ can occur after a syllable peak. In addition to the one hundred and seventy freely occurring items ending in /ʔ/ and the seventy-four free forms ending in /N/, there were forty-seven examples of /ʔ/ occurring in non-final syllables, forty-four examples of /N/ and three examples of /s/. /s/ cannot be the coda of a freely occurring syllable. It always precedes another syllable with an onset /s/, e.g. /hissjakuʔ/ *to tear* consists of three syllables, his - sja - kuʔ.

#### 4.4. Pitch and stress.

The basic intonation contours of statement, suspension, and question were easily recognisable in the Fukue material. All utterances seem to fall into one or other of these three intonation contours. These countour types may be distinguished by the establishment of three terminal countour markers ↓ ↑ →<sup>33</sup> which in turn must be described in terms of relative pitch.<sup>34</sup>

<sup>33</sup> See Hockett *A Course in Modern Linguistics*. p.34

<sup>34</sup> See Martin, "The Morphophonemics of Standard Colloquial Japanese", supplement to *Language* 28 (1952) p.18.

As far as could be established, higher pitch coincides largely with greater intensity and vice versa.<sup>35</sup> It is probably necessary to postulate four pitch phonemes /1/, /2/, /3/ and /4/, with /1/ the lowest and /4/ the highest pitch.<sup>36</sup> The actual pitch may, of course, vary considerably from one speaker to another. Even in the speech of a single individual the pitch may vary according to the emotional state or mood of the speaker. It is only the relative pitches within a single stretch of connected speech, which are significant. Pitch /4/ is used for special emphasis of a certain syllable in a breath group. A breath group is defined as a sequence of phonemes pronounced without pause. A breath group which cannot be reduced to sequences of shorter breath groups is a minimal breath group. In slow deliberate speech

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<sup>35</sup> Martin has since found the three terminals alone are not enough to adequately describe the intonation of standard Japanese. This, no doubt, applies to the Fukue dialect as well, but was beyond the scope of the present study. See Martin. "Junctural Cues to Ellipsis in Japanese" in *Studies in General and Oriental Linguistics*, Tokyo (1970) p.429.

It is possible to give a rough idea of the intonation system with the two pitch levels, high and low usually used by Japanese researchers to describe Japanese dialects ↓ is high/low; → high/high or low/low and ↑ low/high.

The material analysed on the pitch intensity meter was the Kamiōzu text recorded by N.H.K. in vol.9 of *Zenkoku Eōgen Shiryō* sonosheet 1A, kana transcription p.32. The correspondence between pitch and intensity curves was only approximate. No doubt the accentuation system of the Fukue dialect is a complex combination of pitch and intensity. See Neustypný *Nihongo no Akusento wa Kōtei Akusento ka* 日本語のアクセントは高低アセントか。

(Is the Japanese accent a pitch accent)

*Onsei Gakkai Kaihō* 音声学会会報 121 Feb.1966 p. 1-7  
and *Hana to hana no Hatsuon wa hatashite chigau ka?*

花と鼻の発音ははたして違うか。Gengo Seikatsu, 172. 80-87.

(Are the pronunciations of hana (flower) and hana (nose) really different?) For acoustical analysis of the accent of 'standard' Tokyo Japanese.

<sup>36</sup> Martin, *Language*, Supplement, 1952, p.17.

pause is frequent and breath groups numerous. Pitch /4/  
replaces pitch /3/ in excited or animated speech.

The terminal contours may now be redefined in terms of the pitch levels which occur before them † is /31/ or /42/ in excited speech, † /23/ or /33/, † /13/ or /24/. The intonation terminal contours always coincide with the position of #, but # is omitted when a terminal contour can be inserted.

The phonemic pitch patterns which distinguish lexical items in most Japanese dialects are lacking in the speech of Ōhama.

There is no distinction between /hahi/ *bridge* and /hahi/ *chopsticks* whether occurring alone in citation, or in a longer utterance like /hahiNnaka/ *there isn't a bridge; there aren't any chopsticks*.

There is a tendency in Fukue to place the higher pitch and greater intensity on the first syllable of disyllabic nouns, and on the third syllable of three syllable nouns, but usually there is a further rise in pitch towards the end of the utterance. The Ōhama informant seemed to have little consciousness of where he placed the high-pitched syllable peak and often varied it on repetitions of the same form elicited. This is what Hirayama calls hōkai akusento

崩壊アクセント or "obliterating accent",<sup>37</sup> where the position of the high-pitched syllable peak is completely unpredictable and the speaker feels no pitch accent consciousness.

#### 4.5. A Survey of the Phonology of the Dialects of Gotō Archipelago.

##### 4.5.1. The dzige dialects.

The rest of this chapter is devoted to a comparison of the phonology

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37 This translation was suggested by Father W.A.Grootaers. Some Japanese researchers such as Kindaichi and Hattori call this type of dialect muakusento (accentless). Hirayama's description is phonetic, the others phonemic. See *Nihongo Onchō no Kenkyū*, p.297.

of the main dialects of the Gotō Archipelago.

4.5.1. is concerned with the *dzige* dialects, that is the dialects of the descendants of the "original" inhabitants of the islands.

4.5.2. deals with the "itsuki" dialects spoken by Christians whose descendants migrated to the islands from the mainland of Kyūshū sometime after the sixteenth century.

The Fukue city Ōhama dialect (henceforth called the Fukue dialect) described above is fairly typical of the *dzige* dialects. The speech of Fukue possibly constitutes a kind of "standard" language for the Gotō Archipelago.

The dialects can, however, be divided into areas based on phonological differences. In this section no attempt is made to give a thorough phonemic description of each dialect. Points of difference only are treated. The Fukue dialect described above is the basis of comparison.

4.5.2. The Tomie Dialects.

On the island of Fukuejima, about sixteen kilometres by road, south-west of Fukue city lies the town of Tomie-machi,

富江町 Tomie is a small agricultural and fishing community of about 12,000 people.<sup>38</sup>

The dialects of the township of Tomie itself and the villages of Kojima 小島 and Hamanomachi 浜町 are phonologically very similar to the dialect of Fukue city.

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<sup>38</sup> This figure for 1965 compares with a population of 13,500 in 1960. This reflects the trend throughout the islands for population decreases as young people leave to seek employment on the mainland. *Tomie-machi Chōsei Yōran 1967.*

The main phonological<sup>39</sup> difference between Tomie and Fukue lies in the treatment of a group of inflected words. In Tomie these end in /'u/ whereas Fukue has a double vowel.

e.g.	Fukue	Tomie	
	/waraa/	/wara'u/	to laugh
	/'utaa/	/'uta'u/	to sing

The dialects of Yamashita and Kurose, on the other hand, are phonologically rather different from that of Fukue city.

The dialect of Yamashita 富江町山下 described here is based on the speech of Enokitsu Yoshio 榎津幸男, male, born in the Ishima 石間 hamlet of Yamashita village in 1936 and Murano Ichimatsu 村野市松, male, born in Yamashita 山下郷上新 in 1910.<sup>40</sup>

The Yamashita dialect differs somewhat from that of Fukue city in the structure of the syllable. The unreleased stop segment [kʔ] and the consonants [tʃ] [ʃ] [m] [n] [r] all occur in the environment V\_\_\_\_#, whereas Fukue has only /ʔ/ and /N/ in this position.

Yamashita	Fukue	
/k/ [kʔ] in V____#	/'iʔ/ [itʔ]	to go
/ik/ [ikʔ]	/kaʔ/ [katʔ]	to write
/kək/ [kəkʔ]	/cuʔ/ [tsutʔ]	moon
/cuk/ [tsukʔ]	/suʔ/ [sutʔ]	plough
/suk/ [sukʔ]	/murasəʔ/ [murasatʔ]	purple
/murasak/ [murasakʔ]	/juʔ/ [jutʔ]	snow
/juk/ [jukʔ]		

<sup>39</sup> The dialect of Kojima differs from Fukue in having the sequence /kw/ occurring in some morphemes where Fukue has /k/, e.g. /kwahi/ *cakes*.

<sup>40</sup> Enokitsu has spent all his life on the island. Murano has lived in Tomie except for ten years in the army from the age of twenty.

## Yamashita

## Fukue

/c/ [tʃ] <sup>41</sup>	'ʔ/	
/'icuc/ [itsutʃ]	/'icuʔ/ [itsutʔ]	five
/'inoc/ [inotʃ]	/'inotʔ/ [inotʔ]	life
/kuc/ [kutʃ]	/kuʔ/ [kutʔ]	mouth
/katak/ [katatʃ]	/kataʔ/ [katatʔ]	shape
/mic/ [mitʃ]	/miʔ/ [mitʔ]	road
/mac/ [matʃ]	/maʔ/ [matʔ]	town
/hutac/ [ʔutatʃ]	/hutaʔ/ [ʔutatʔ]	two
/s/ [ʃ] <sup>42</sup>	/hi/ [çi]	
/is/ [iʃ]	/'ihi/ [içi]	stone
/'us/ [uʃ]	/'uhi/ [uçi]	cow, mortar
/'as/ [aʃ]	/'ahi/ [açi]	foot
/'aras/ [araʃ]	/'arahi/ [araçi]	storm
/kos/ [koʃ]	/kohi/ [koçi]	hips
/kas/ [kaʃ]	/kahi/ [kaçi]	to lend
/kes/ [keʃ]	/kehi/ [keçi]	to extinguish
/mes/ [meʃ]	/mehi/ [meçi]	boiled rice
/nas/ [naʃ]	/nahi/ [naçi]	eggplant
/r/	'ʔ/	
/'okir/	/'okiʔ/	to get up
/'or/	/'oʔ/	there is
/'ar/	/'aʔ/	there is (inanimate)

<sup>41</sup> As [ts] and [tʃ] do not contrast in V\_\_\_\_#, [tʃ] is assigned to /c/.

<sup>42</sup> [s] and [ʃ] do not contrast in V\_\_\_\_#



Yamashita		Fukue	
/r/		/ʔ/	
/tor/		/toʔ/	bird
/kir/		/kiʔ/	mist
/kur/		/kuʔ/	chestnut
/kjur/		/kjuʔ/	cucumber
/karur/		/karuʔ/	to dry up
/sur/		/suʔ/	to do
/har/		/haʔ/	needle
/mir/		/miʔ/	to see
/mjur/		/mijuʔ/	to be visible
/N/		/N/	
/ʔussaN/		/ʔusaN/	rabbit
/ʔunaN/		/ʔunaN/	eel
/kuN/		/kuN/	nail
/gaN/		/gaN/	crab
/cuN/		/ciN/	to pour
/m/		/N/	
/ʔum/		/ʔuN/	sea
/ʔam/		/ʔaN/	net
/ʔajum/		/ʔajuN/	to walk
/tenom/		/tanoN/	to ask
/kum/		/kuN/	to draw
/kojom/		/kojoN/	calendar
/kange/		/kaNge/	hair
/sun/		/suN/	charcoal
/mim/		/miN/	ear
/nanda/		/naNda/	tear

In analysing the Yamashita material it is necessary to include the unreleased stop segments such as [tʔ], [kʔ] with the phonemes /t/, /k/, etc. to account for the contrasts in V\_\_\_\_#. <sup>43</sup>

Yamashita also differs from the Fukue dialect in the distribution of some of the phonemes. /c/ which occurs before V or /j/ in Fukue, may occur in V\_\_\_\_C in Yamashita, e.g. /'acka/ [at/ka] *hot* <sup>44</sup>. /r/ occurs before /m/ in /kurma/ *cart* and /b/ in /harbamotteko/ *bring a needle*.

The segment [m] in the environment V\_\_\_\_C,# cannot be assigned to /N/ as [m] and [n] contrast in this position, /siNda/ *died*, /namda/ *tear*, /'omtaka/ *heavy*. No contrast occurs with [ŋ] which remains a member of /N/.

The Yamashita dialect has some morphemes with /u/ where Fukue has /ʔ/ or /bi/.

Yamashita	Fukue	
/ʔou/	/ʔoʔ/	sash
/ʔakuu/	/ʔakuʔ/	yawn
/kuu/	/gaNkuʔ/	neck
/juu/ <sup>45</sup>	/jubi/	finger

<sup>43</sup> This means that /ʔ/ does not occur in Yamashita.

<sup>44</sup> No voiceless vowel was detected between /c/ and /k/. As one cannot know if the theoretical voiceless vowel should be assigned to /i/ or /u/ it seems preferable to recognize the consonant cluster.

<sup>45</sup> The Tomie dialects of Kojima and Hamanomachi have /juN/ [jŋn] *finger*.

Yamashita has /u/ for Fukue /N/ in some inflected morphemes.

Yamashita	Fukue	
/’era’u/	/’eraN/	to choose
/’aso’u/	/’asoN/	to play
/to’u/	/toN/	to fly
/nara’u/ <sup>46</sup>	/naraN/	to be lined up

There are also certain differences in vowel sequences.

/kja/ [kja]	/kjaa/ [kja]	shell
/kjata/ [kjata]	/kaata/ [ka:ta]	wrote
/sjata/ [fata]	/saata/ [sa:ta]	bloomed
/hja/ [ca]	/hjaa/ [çaa]	ash
/jo’u/ [jou]	/joo/ [jo:]	to get drunk

The structure of the Yamashita syllable is shown in the following diagram. The complex onset /kw/ occurs in Yamashita as it does in all the Tomie dialects.

In one morpheme [wijur] *to plant* /w/ seems to occur before the high front vowel. Until further examples of this distribution are confirmed this is analysed as /’u’ijur/.

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<sup>46</sup> In Yamashita this is a homophone of /nara’u/ *to learn*, cognate with Fukue /naraa/.

Onset		Peak		Coda
k	w	a		
g				
p				k
b		i	i	c
c		u	u	m
k		e	e	n
g		o	o	r
s		a	a	s
z				p-
h				b-
m				t-
n	j	u		d-
r		o		
d		a		g-
t		e		
		o		
		a		
		m		

- indicates a following syllable with an onset in the same phoneme as the coda. /m/ is syllabic in#\_\_\_m and occurs as a syllable peak. The diagram shows all possible combinations for the Yamashita syllable. Permissible combinations are indicated by a line running from left to right never crossing a horizontal line.

Not all of the possible combinations actually occur in the material collected. Yamashita and in fact all the Tomie dialects resemble Fukue in having a non-contrastive pitch accent system.<sup>47</sup>

#### 4.5.2.1. The Kurose dialect.

Kurose 黒瀬 富江町 is a small fishing village with a population of about one thousand a few kilometres south of the township of Tomie and five kilometres west of Yamashita. The present account is based on the speech of Miura Sachie 三浦サチエ, female, born 1915, native and lifelong resident of Kurose.

The Kurose informant clearly distinguished the voiced alveolar and prepalatal fricative / affricate contrast known to Japanese dialectologists as the four kana distinction.<sup>48</sup> Shibata reports this contrast for the Kamiōzu dialect of Fukue city.<sup>49</sup> It did not occur in the speech of any of the Fukue<sup>50</sup> informants interviewed by the team from Tokyo Metropolitan University in August, 1968, but possibly still occurs in the speech of older speakers. Miura Sachie clearly made the distinction in the forms, [ɸuzisã] *Mt. Fuji*, [ɸudzinoxana] *wisteria*, [suzu] *bell* and [tsidzu] *map*. [z] and [ʒ] are analysed as /z/ and /zj/, [dz] and [dʒ] as /d/ and /dj/. This means that /d/ has a wider distribution in Kurose than in either Fukue or the other Tomie dialects.

Kurose has the same number of phonemes as Fukue, but differs somewhat in the distribution of phonemes in the coda of the syllable.

<sup>47</sup> i.e. pitch plays no part in distinguishing lexical items.

<sup>48</sup> The distinction as shown in the traditional orthography シ ぢ ズ ツ

<sup>49</sup> Shibata *Zenkoku Hōgen Shiryō*. IX, p.16.

<sup>50</sup> This includes Ōhama and Kamiōzu.

In some morphemes Fukue and Tomie /ʔ/ corresponds to Kurose /ʔ/, while in others Kurose has a vowel sequence (long vowel). These morphemes are cognate with the Yamashita forms in final /r/, e.g. Fukue /toʔ/, Yamashita /tor/, Kurose /too/ *bird*.

Examples of Kurose /ʔ/ in V\_\_\_\_\_# are:-

/ʔicuʔ/	five
/ʔiʔ/	breath
/ʔuʔ/	to hit
/ʔoʔ/	offing
/cuʔ/	moon
/koʔ/	spider

The above are the same as Fukue and the Hamanomachi and Tomiegō dialects of Tomie.

Kurose double vowel corresponds to Fukue and Tomie /ʔ/ and Yamashita /r/ in the following examples.

/ʔoo/	there is, exists
/ʔokii/	to get up
/cuu/	bowstring
/kii/	to wear
/kuu/	to come
/kaa/	to mow
/suu/	to do
/mii/	to see
/haa/	needle

Kurose differs from the other dialects of the Gotō Archipelago in having /h/ in V\_\_\_\_\_# The phonetic nature of /h/ in this position is determined by the preceding vowel. [ϕ] occurs in u\_\_\_\_\_#,

[x] in o, a \_\_\_\_\_# and [ç] in i \_\_\_\_\_#.

/’ih/	[iç]	stone
/’uh/	[uφ]	cow, mortar
/’okoh/	[okox]	to wake up
/kwah/	[kwax]	cakes

In a series of inflected morphemes Kurose has /’/ where

Fukue has a long vowel and Tomie and Yamashita have /u/.

/’uta’/	to sing
/ku’/	to eat
/ju’/	to say
/jo’/	to get drunk

Kurose resembles Yamashita and differs from Fukue in having the complex onsets /kw/ and /gw/, e.g. /kwah/ [kwax] *cakes*, /kwaNnoN/ [kwännōn] *goddess of mercy*, /gwaNzi’/ [g<sup>w</sup>anzit’/ *New Year's Day*. The syllabic structure of Kurose lies somewhere between that of Yamashita and Fukue. Kurose has three phonemes, /’/, /N/ and /h/ which occur before #.

#### 4.5.3. Tamanoura Dialect.

Tamanoura-machi, Minami Matsuura-gun 南松浦郡玉之浦町 is a fishing harbour with a population of about 5,000, situated in the extreme south-west corner of Fukue island about thirty kilometres from Fukue city.

Tamanoura dialect resembles that of Fukue except that it has the four kana distinction and certain morphemes ending in /i/, cognate with Fukue forms ending in /’/.

/suzu/	[suzu]	bell
/cidu/	[tʃidzu]	map
/zibuN/	[ʒibũn]	oneself
/disiN/	[dʒisĩn]	earthquake

Examples of Tamanoura /i/ cognate with Fukue /ʔ/ are:-

/toi/	[toi]	bird
/kaNnai/	[kannai]	thunder
/'ui/	[ui]	melon
/kui/	[kui]	to come

The dialect of the village of Arakawa 荒川 in Tamanoura-machi has /'uʔ/, /toʔ/, and /kuʔ/ and /kaNnaʔ/ for the examples given above.

#### 4.5.4. Miiraku Dialect.

Miiraku-machi 三井楽 is a town with a population of about eight thousand situated on the north-west coast of Fukuejima island. The dialect analysed was that of the central district Hamanokuri 浜ノ畔. The informant was Hiraoka Kaneo 平岡兼男, male, born in 1918 in Hamanokuri and has spent most of his life in Miiraku. The dialect of Miiraku is phonologically similar to the general Fukuejima pattern as typified by the Fukue dialect. An important difference is the fact that the Miiraku dialect lacks open monosyllables ending in a short vowel.

[do:]	door
[ke:]	hair
[ko:]	child
[ka:]	mosquito, river
[ho:]	sail



[je:]	picture
[ju:]	hot water

The forms with the long vowel, however, only occur in citation, that is, when the morpheme occurs before #. When a syllable follows in the same breath group, a morpheme alternate with a short vowel is used, e.g. [toba'akerel] *open the door*, [kenonaka] *has no hair*, [kono'o?] *there is a child*, [junowa:ta] *water boiled*. The position with [ka:], however, is rather different. In the sense of *mosquito* [ka:] becomes [ka] when a particle follows, [kan'o?] *there is a mosquito*, but in the sense of *river* [ka] retains the long vowel even when followed by a particle, [ka:bawatat?] *cross the river*. A morphophonemic transcription would give //ka// *mosquito* and //kaa// *river*.

The Miiraku informant clearly distinguished the voiced fricative and affricate segments [z], [dz] and [ʒ], [dʒ].

[kizu]	/kizu/	wound
[tʃidzu]	/cidu/	map
[ɸuzisan]	/huzisaN/	Mt. Fuji
[ɸüdʒinohana]	/hudinohana/	wisteria

In the speech of the informant Hiraoka, the vowel segment preceding the voiced affricates is nasalized, although the vowel preceding the phoneme /d/ is not usually nasalized elsewhere. /i/ is [ĩ] in the environment /\_\_\_ di, du/. Some morphemes have prenasalized /d/ where the Fukue cognates do not. e.g. [m̃indori] *green* compared with Fukue [midori].

Miiraku contrasts with Fukue in some lexical items. The following are typical of Miiraku dialect forms.

/ʔaoʔ/	[aotʔ]	abalone
/ʔiʔgo/	[igʔgo]	strawberry
/ʔeNbi/	[jembi]	prawn
/ʔoʔtaka/	[otʔtaka]	heavy
/teNdu/	[tendzu]	sky
/tjaara/ <sup>51</sup>	[tja:ra]	tub
/kimoN/	[kimõŋ]	kimono
/kaara/	[ka:ra]	tile
/siʔbo/	[fibʔbo]	tail
/nuja/	[nuja]	garden

The dialects of Fukuejima, then, fall into three main types, Fukue, Yamashita and Kurose. Tomie, Tamanoura and Miiraku closely resemble the Fukue dialect, but differ in having the "four kana" distinction and the complex onsets /kw/ and /gw/.

The dialects of the other islands of the Gotō Archipelago also fall into two groups based on differences in their phonemic structure.

The dialects of Hisakajima 久賀島 and Kabashima<sup>52</sup> 樺島 closely follow the phonemic pattern of Fukue. In some morphemes where Fukue has final /hi/ Hisakajima and Kabashima have final /i/,

51 The onset /tj/ does not occur in the Fukue dialect [tj] and [tʃ] contrast in Miiraku. Phonemically the contrast is /tj/ and /cʃ/.

52 Informant for Hisakajima, Yamada Satoru 山田寛, male, born 1926 in the Inoki district of Hisakajima. 猪不郷猪之本  
For Kabashima the informant was Tsuda Hiroshi 津田広, male, born 1927 in Ifukui-chō. 伊福井町。

e.g. /hai/ *bridge*; *chopsticks* compared with Fukue /hahi/<sup>53</sup>.

Kabashima and Hisakajima also differ from Fukue in having long vowels in open monosyllables, e.g. [tʃi:] *blood*, [ci:] *fire*, [ha:] *leaf* [ho:] *ear of rice*.

Naru 奈留 Shinuonome 新魚目 and Wakamatsu 若松 belong to the same phonemic system as Fukue, with the exception that the Unome dialect has the complex onsets /kw/ and /gw/ in /kwasi/ *cakes*, /kwaNnoN/ *goddess of mercy*, /gwaNziʔ/ *New Year's Day*.

Arikawa 有川 too, closely resembles Unome, but differs in some morphemes.

Arikawa		Kita Unome (Ogushi)	
/sugaN/	ant	/sugaʔ/	ant
/'eNba/	dragonfly	/'ebo/	dragonfly
/toora/	rice bale	/taara/	rice bale
/cu/	scale	/cu/	scale
/kahi/	cakes	/kwasi/	cakes
/kaNnoN/	goddess of mercy	/kwaNnoN/	goddess of mercy
/kakaa/	mother	/kaʔkaa/	mother
/ziʔzii/	grandfather	/ziʔcii/	grandfather

The dialect most divergent from the Fukue pattern is the dialect of Kami Gotō 上五島 on the northwest of the island of Nakadōrishima 中通島. The following account is of the Aokata 青方 dialect of Kami Gotō-cho 上五島町. The informant was Nagata Kenzō 永田兼三, male, born in 1925. The

<sup>53</sup> Kabashima has /kihi/ *wound* and /mimihi/ *earthworms* where Fukue has /kizu/ and /mimindzo/. This is said to be a survival of the older four kana distinction in which original \*/zu/ becomes /hi/ and original \*/dzu/ becomes /N/.  
 \* kizu - /kihi/  
 \* midzu - /miN/

number of phonemes in the dialect is the same as for Fukue and the possible syllable shapes are identical. However, there are some morphemes where Aokata /ʔ/ corresponds to Fukue /ʔ/ and others where Aokata /i/ corresponds to Fukue /ʔ/.

Aokata /ʔ/		Fukue /ʔ/	
/ʔoʔ/	sash	/ʔoʔ/	sash
/kuʔ/	mouth	/kuʔ/	mouth
/kataʔ/	shape	/kataʔ/	shape
/gaNkuʔ/	neck	/gaNkuʔ/	neck
/cuʔ/	moon	/cuʔ/	moon
/saʔ/	point	/saʔ/	point
/hitoʔ/	one	/hitoʔ/	one
/hataraʔ/	to work	/hataraʔ/	to work
/moʔ/	to hold	/moʔ/	to hold

Aokata /i/		Fukue /ʔ/	
/ʔoi/	is, exists	/ʔoʔ/	is, exists
/ʔokii/	to get up	/ʔokiʔ/	to get up
/ʔai/	there is	/ʔaʔ/	there is, is situated
/toi/	bird	/toʔ/	bird
/kii/	to wear	/kiʔ/	to wear
/kui/	to come	/kuʔ/	to come
/kemui/	smoke	/kemuʔ/	smoke
/hitoi/	one (person)	/hicjoʔ/	one (person)
/hidai/	left	/hidaʔ/	left
/hokoi/	dust	/hokoʔ/	dust

#### 4.5.5. The Christian Dialects

There are Christian settlements scattered throughout the archipelago, some like the village of Okuura 奥浦 in Fukue being almost four hundred years old. With the proscription of Christianity by Toyotomi Hideyoshi in 1587 many Christians fled from the Kyūshū mainland to remote islands to live and practice their religion in secret. Most of the Christian settlers in the Gotō Archipelago seem to have come from the area around present day Ōmura-shi

大村市.<sup>54</sup>

The Christian dialects throughout the islands are almost the same and seem to have been little influenced by the "dzige" dialects. Christian communities even now are rather isolated and tend to avoid mixing with non-Christians. The dialects closely resemble those of the Nagasaki mainland.

The following description of the dialect of Miiraku-chō, Takegō is based on the speech of Nakamura Masato 中村政人, male, born 1916, raised, educated and domiciled most of his life in Miiraku. About one third of Miiraku's nine thousand inhabitants and seven out of the eighteen settlements (buraku 部落) are Christian.

Takegō was established about one hundred years ago by settlers from Ōmura.

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<sup>54</sup> This area was a stronghold of Christianity. The daimyō of Ōmura sent an envoy to the Vatican in about 1590.

The Christian dialects lack the distinctive closed syllable of the dzige dialects. The unreleased consonant segments [pʔ], [tʔ], [dʔ], [kʔ], [gʔ] etc. occur only in medial positions as the first segment of geminate consonant sequence /pp/, /tt/, /kk/, etc. Here the first member is considered to be syllabic, having the same duration as a mora consisting of a consonant followed by a short vowel. The unit of rhythm in the Christian dialects is the mora. They may be called mora dialects in contrast with the syllable<sup>55</sup> dialects of the dzige settlements. The mora types which occur are:-

V, CV, CSV, Q (syllabic obstruent) and N (syllabic nasal).

The vowel phonemes are /i/; /u/; /e/; /o/; /a/. Consonant phonemes are /p/; /b/; /t/; /d/; /c/; /k/; /g/; /s/; /z/; /h/; /m/; /n/; /r/; /j/; /w/. The alveolar and prepalatal voiced fricative/affricate contrast [z]; [dz]; [ʒ]; [dʒ] found in some of the "dzige" dialects was not heard in any of the Christian dialects.<sup>56</sup>

<sup>55</sup> Shibata uses the term syllabeme for the phonemic syllable, reserving 'syllable' for the phonetic concept. Shibata "On'in", *Hōgengaku gaisetsu*. p.138. 方言学概説

<sup>56</sup> The dialects investigated and informants were:-  
 Fukue-shi, Okuura 奥浦, Nakamura Shizuo 中村 静夫 (m, 45);  
 Miiraku-machi, Takegō 岳郷, Nakamura Masato 中村 政人 (m, 52);  
 Shinuoneme-machi, Maruo 丸尾, Ikuta Tomi 生田 トミ (f, 51);  
 Naru-machi, Maejima 前島, Michiwaki Yoshinori 道脇 義規 (m, 46)  
 Fukushima Hatsu 福島 八ツ (f, 45); Naru, Ainoura 相ノ浦, Fujiwara  
 Noboru 藤原 登 (m, 42), Matsumoto Hidetoshi 松本 英敏 (m, 21).

The Christian dialects share the general western Kyūshū phonological features of having [ʃe] and [dʒe] for /se/ and /ze/ with other dialects of the archipelago. Devoicing of the vowels /i/ and /u/ is common between voiceless consonants and before #. /u/ in the environment r\_\_\_\_\_# is usually devoiced and occasionally lost, e.g. [toru] *to take* or [tor]. This is best considered a purely phonetic phenomenon analysed as /toru/ <sup>57</sup>

A comparison of the Christian and "dʒige" dialects of Miiraku shows that in place of the coda /ʔ/ of the "dʒige" dialects the "itsuki" (Christian) dialect has a mora /bi/; /ci/; /cu/; /ki/; /ku/; /ri/ or /ru/.

Take-gō	Hamanokuri
/tori/ [tori]	/toʔ/ [totʔ] bird
/cuki/ [tsuki]	/cuʔ/ [tsutʔ] moon
/kubi/ [kubi]	/gaNkuʔ/ [gãŋkuʔ] neck
/kaku/ [kaku]	/kaʔ/ [katʔ] to write
/horu/ [hor]	/hoʔ/ [hotʔ] to dig
/mici/ [mitsi]	/miʔ/ [mitʔ] road
/nacu/ [natsu]	/naʔ/ [natʔ] summer

In some morphemes the "dʒige" dialect coda /N/ is cognate with the "itsuki" mora /N/, in others with "itsuki" /bu/; /gi/; /gu/; /mi/; /mu/; /ni/; /nu/ and /zu/.

Take-gō	Hamanokuri
/'inu/ [inu]	/'iN/ [iŋ] dog

<sup>57</sup> This analysis is not possible with the Tomie Yamashita dialect where no final vowel is ever audible. [tor] is /tor/.

	Take-gō		Hamanokuri	
/’umi/	[umi]	/’uN/	[ũŋ]	sea
/’ami/	[ami]	/’aN/	[ãŋ]	net
/tobu/	[tobu]	/toN/	[tõŋ]	to fly
/sugi/	[sugi]	/suN/	[sũŋ]	cryptomeria
/kogu/	[kogu]	/koN/	[kõŋ]	to row
/kumu/	[kumu]	/kuN/	[kũŋ]	to draw(water)
/gani/	[gani]	/gaN/	[gãŋ]	crab
/mizu/	[midzu]	/min/	[mĩŋ]	water

Other differences between the "d̤ige" and "itsuki" dialects are:-

"Itsuki" /si/;/su/ before # are cognate with "d̤ige" /hi/.  
 e.g. Takegō /katasi/ [kataʃi] and Hamanokuri /katahi/ [kataçi] *camellia*, Takegō /kasu/ [kasu] *to lend*, Hamanokuri /kahi/ [kaçi] *id.*

"Itsuki" /ai/ is cognate with "d̤ige" /jaa/.  
 e.g. Takegō /mairu/, Hamanokuri /mjaaru/ *to go*, Takegō /kai/ and Hamanokuri /kjaa/ *shell*.

The pitch accent of the "itsuki" dialects tends to be more regular than that of the "d̤ige" dialects. Although there is no distinctive pitch contrast distinguishing lexical items, phrases regularly have a high pitch over the mora or morae immediately preceding pause.<sup>58</sup>

<sup>58</sup> Shibata reports this utterance final rising intonation as a feature of the Urakuwa dialect of Shinuenome-chō. *Zenkoku Hōgen Shiryō* vol 9. "Hekichi Ritō-hen" p.29.



This pitch accent type is what Hirayama terms the "unified one-pattern accent," *tōgō ikkei akusento* 統一型アケ斗<sup>59</sup> e.g.

[amé] *rain*, [amenoɸutʔtsóru] <sup>60</sup> *rain is falling*. The pitch

accent contour of the "dōjige" dialects is less predictable. In

the speech of the Hamanokuri informant single morphemes in

citation tended to have the high pitch on the first syllable, but

the high pitch shifted irregularly in longer utterances.

e.g. [xána] *flower* and [xánãnsa:ta] *the flower bloomed*, but

[jána] *mountain* and [jamãntákʔka] *the mountain is high* <sup>61</sup>.

#### 4.5.6. The Naru Dialect.

The dialects of the Christian communities of Maejima 前島  
Ainoura 相浦 and Ōbayashi 大森 of Naru-cho 奈留町,

appear to have phonemic pitch at the lexical level. According

to Hirayama pitch accent patterns are discernable in careful

speech. Those morphemes which correspond to monosyllables in

standard Tokyo Japanese are slightly lengthened. They fall into

two groups which Hirayama calls "head high" and "tail high".

Group 1 [●●,○▲] ( ● indicates a high-pitched mora; ○ a low-pitched mora; ● half length and ▲ a grammatical particle)

[kã] mosquito

[kabakorose]

kill the mosquito

[hõ] sail

[honomieta]

sail was visible

<sup>59</sup> Hirayama Teruo. *Nihongo Onchō Kenkyū*. p. 287.

<sup>60</sup> Where the final mora has a devoiced vowel the high accent falls on the preceding vowel.

<sup>61</sup> The position of the accent varies with repetitions of the same utterance.

Group 1 [0D,0A]

[k̄ī·] tree	[k̄ibak̄ire]	cut the tree
[x̄ā·] tooth	[x̄anoit̄aka]	tooth is sore

Other nouns in group 2 include, [t̄ē·] *hand*; [ç̄ī·] *fire*; [h̄ō·] *ear of grain*. Now, if the lengthening of monosyllables in citation is to be regarded as non-distinctive, as in 4.5.4. then monosyllables must be marked for high pitch accent in such a way that it is possible to predict the accent of the pause group from the phonemic shape of the morpheme in isolation. Hirayama analyses the "tail high" morphemes as phonemically unaccented, i.e. /0/ and the "head high" morphemes as /ō/. As the fall from high pitch to low pitch occurs not within the mora as /ō/ would indicate, but before the non-phonemic length the phonemic shape of the mora is simply /ó/. This means that the main distinction is between tonic and atonic words. When atonic morphemes combine with a particle to form an accent phrase all morae from the second to the next distinctive fall in pitch are pronounced on a higher pitch e.g. the accent phrase (or breath group) [h̄onomīeta] *sail was visible* consists of the atonic element /ho/ *sail* plus the tonic element /mīeta/ *was visible*. Phonemically the phrase can be written /honomīeta/. The rule is that all morae except the first preceding an accent are pronounced on a pitch relatively higher than other morae in the breath group.

Morphemes of two or three morae likewise fall into tonic and atonic groups

Two mora morphemes.

a) Atonic. /00/ [00,00A]

/hana/ nose; /'usi/cow; /tori/<sup>62</sup> bird; /hako/ box; /mizu/ water;  
 /'oto/ sound; /kami/ paper; /hasi/ bridge; /mune/ chest; /kumu/ to  
 draw (water); /huru/ to wave; /maku/ to wind.

b) Tonic. /'oo/ [oo,ooΔ]<sup>63</sup>

/'ame/ rain; /hana/ nose; /jama/ mountain; /'in/ dog; /'umi/ sea;  
 /kasa/ umbrella; /hune/ boat; /hasi/ chopsticks; /ko'e/ voice;  
 /kage/ shadow; /muko/ bridegroom; /kaku/ to write; /nomu/ to drink.

Three mora nouns fall into two groups, but there is a certain amount of overlap of the high pitch distribution shapes for words given in isolation. Only when a particle follows is it really possible to assign three mora morphemes to their tonic or atonic group.

There is a tendency with three mora morphemes in isolation to pronounce atonic forms with a high pitch on the second mora, [akubi] *yam*, [akubindeta] *yamed*; [sakura] *cherry blossom*, [sakurānkareta] *cherry blossom dried up*.

In the following chart borrowed from page twenty of *Gotō Rettō no Hōgen*, Professor Hirayama uses the symbol 7 to indicate the point of fall from higher pitch to lower pitch.<sup>64</sup>

62 The pronunciation [toi] occurs in free variation with [torī]. Where the second mora is weak, as in the case of a vowel mora combining with the vowel of the preceding mora to form a diphthong, the high pitch extends over both vowels, [toi] *bird*.

63 In some morphemes where the second mora lacks independence (i.e. is the second member of a vowel sequence or /N/) the high pitch remains on the first mora, e.g. [in] *dog* [innokita] *dog came*.

64 Other examples included in Hirayama's chart are the atonic forms /hi/day, /maku/to wind, /'onago/woman, /'akaka/red, and the tonic forms /maku/ to saw, /muko/ bridegroom, /'inoci/ life, /'unagi/ eel, /sirōka/ white. The tonic form /'abura/ occurs in free variation with /'abura/. Hirayama 1969. 20.

The inked-in symbols indicate high-pitched morae, plain symbols low-pitched morae.

THE PITCH ACCENT SYSTEM OF MAEJIMA DIALECT NARU-CHO

mora	pitch contour	phonemic analysis	example
1	●D    OΔ	o	/ci/ <i>blood</i> , /ha/ <i>leaf</i>
	●D    ●Δ	ȯ	/k̥i/ <i>tree</i> , /hi/ <i>fire</i>
2	OO	OO	/hana/ <i>nose</i> , /'oto/ <i>sound</i>
	OO		
	●O    OOΔ ●OΔ	ȯo	/hána/ <i>flower</i> , /'áme/ <i>rain</i>
3	OOO	OOO	/'akubi/ <i>yawn</i>
	OOO    OOOΔ		/sakura/ <i>cherry blossom</i>
	OOO		/'abura/ <i>oil</i>
	OOO    OOOΔ	ȯoo	/'otóko/ <i>man</i>
	●OO		/'usági <i>rabbit</i> /kuzíra/ <i>whale</i>

Three mora verbs fall into a single pattern with the high pitch on the second mora, e.g. [tanomu] *to ask*. Three mora adjectives, however, may be divided into two groups according to the distribution of the pitch accent.

Group 1 (atonic)

/'asaka/ *shallow*; /'acuka/ *thick*; /'akka/ *red*. High pitch does not fall on a devoiced vowel or a syllabic vowel e.g. [atsuka].

Group 2 (tonic)

/siróka/ *white*; /hukáka/ *deep*; /'acúka/ *hot*.                      /'acúka/

is phonetically [atsuka]. A rule transferring an accent mark from

a devoiced vowel to the preceding vowel gives the required phonetic shape. In slow, deliberate speech the vowel is not devoiced and the high pitch falls on the vowel of the second mora, [atsúka].

Professor Teruo Hirayama maintains that the pitch accent distinctions of the Christian dialects of Naru are gradually becoming obliterated.

He writes in *Gotō Rettō no Hōgen* - 五島列島の方言 p.21,

Even among the catholic communities of Naru, there are slight differences from one area to another, but one point which seems to be shared by all the dialects in the group is the fact that the influence of the non-contrastive accent pattern of the surrounding "dzige" dialects and the independent changes brought about through the numerical weakness of the linguistic group is obliterating the consciousness of the pitch accent patterns. Further, there is considerable individual variation. This is particularly striking in younger speakers. For example, a young informant, Matsumoto Hidetoshi (male, 18 years) from the catholic settlement of Ainoura in Naru-chō, while very aware of sounds generally, spoke with an unstable pitch accent. Furthermore, one informant<sup>65</sup> who spent the first eighteen years of her life in the very settlement of Maejima which produced the informant on whose speech the above account of Naru accent is based, has unstable pitch accent.

Hirayama believes that within two or three decades the Naru dialect will probably have lost its phonemic pitch accent and joined other Gotō dialects, Christian and "dzige" alike, in having a non-contrastive

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65 Fukushima Hatsu 福島ハツ, female, born 1924.

pitch accent system.<sup>66</sup>

The reason the Christian dialects of Naru-chō alone have retained the pitch-accent contrast is perhaps due to the fact that the number of Christian communities in the area is proportionally greater than in other areas of the Gotō Archipelago, and that there has been a long tradition of isolation from other groups.

The pitch accent system of Nagasaki-shi and Ōmura.

The pitch accent systems of Ōmura and Nagasaki-shi are almost identical, both being two-pattern accent systems (nikei akusento ニ型アクセント)<sup>67</sup> distinguishing final-accented and penultimate-accented phrases. While the phonetic character of the Naru pitch contrasts varies slightly from that of the Ōmura dialect, the division of morphemes into various accent-pattern groups is the same. The Ōmura dialect pitch accent system is shown in the following diagram.

THE PITCH ACCENT SYSTEM OF THE DIALECT OF ŌMURA-SHI

mora	pitch contour	phonemic analysis	example
1	●D ●DA	ð	/ká/ mosquito
	●D ODA	o	/ki/ tree
2	●O ●OΔ	ðo	/hána/ nose
	●O OOΔ	oo	/hana/ flower
3	●●O ●●OΔ	oðo	/'akúbi/ yawn
	●●O		
	●●O ●●OΔ	ooo	/'otôko/ man

66 Hirayama's hōkai akusento 崩壊アクセント.

Hirayama, 1957, p.297.

67 Ono Shimao in *Hōgengaku Kōza*. IV, p.192.

The final accented forms are analysed as atonic. The final mora of an atonic accent phrase is pronounced on a higher pitch. Where the final mora is syllabic or contains a devoiced vowel the high pitch falls on the vowel of the preceding mora. Ōmura atonic forms correspond to Naru-chō tonic forms and vice versa.

## APPENDIX TO CHAPTER IV

## FUKUE-SHI, KAMIŌZU DIALECT

The following is a transcription of the sonosheet recording of the Kamiōzu dialect of Fukue-shi, included in the Nihon Hōsō Kyōkai (Japan Broadcasting Corporation) publication *Zenkoku Hōgen Shiryō* (All Japan Dialect Materials), vol. 1X "Hekichi-Ritō-hen" (Isolated Areas and Off-shore Islands, edition 111). Although a kana transcription appears in the text (p.35-37) the transcription given here is based, as far as possible, on the recorded material. A pitch meter analysis of the recording was also undertaken. The broad phonetic transcription and the phonemic analysis are the same as for the Ōhama dialect examined in Chapter IV, although for typographical reasons the palatalized segments are marked with an acute. Where a rise in pitch was particularly noticeable it is indicated in the phonetic transcription, but only the main intonation terminals appear in the phonemic transcription.

The Kamiōzu dialect differs from the Ōhama dialect in distinguishing voiced alveolar affricates and voiced prepalatal fricatives, but is essentially the same in other respects.

Free Conversation 1 (sonosheet 1 A)

Informants            m. Sakaguchi Shinzō, born 1900.  
                           f. Yamamoto Yoshi, born 1904.



m, [#jap<sup>o</sup>pa: → moto: → tano<sup>o</sup>simĩn<sup>o</sup>ſi<sup>o</sup>tſot<sup>o</sup>takeredza ↓

/ # ja<sup>o</sup>pa: → moto: → tanosimi N sicjo<sup>o</sup>ta kere dja ↓

やはり 昔は 楽しみをしていたのでしょね

çitotsut<sup>o</sup> ip<sup>o</sup>pēnzura → nízu:sā:tſi<sup>o</sup> → odosā:de ↓

hitocu<sup>o</sup> 'i<sup>o</sup>peN zura → nizju:san<sup>o</sup>ci → ,odosan de ↓

一月に 一回ずつ 23日 (水) お地蔵さまで

f, [#kūrgat<sup>o</sup>tu → ſōrgat<sup>o</sup>tu → gogat<sup>o</sup>tu → m, [#o: mo: ↓]

/ #kuNga<sup>o</sup> to → sjoNga<sup>o</sup> to → goga<sup>o</sup> to → / #o: mo: ↓ /

九月 と 正月 と 五月 はい そうだ

jōnkaget<sup>o</sup>tſi<sup>o</sup>ip<sup>o</sup>pēnzurajamōnno: # ] m, [# ſo:gokugat<sup>o</sup>tſa: → mo:korja

joNkage<sup>o</sup> ci 'i<sup>o</sup>peN zura ja moN no: ↓ # / # sjo:gokuga<sup>o</sup> cja → mo, korja

四ヶ月 に 一回ずつ だものね。 正・五・九月は これは

kit<sup>o</sup>to ↑ xazūntaine f, [# o: #] 'at<sup>o</sup>te → utschu:wa<sup>o</sup> mo: → kotōndo

ki<sup>o</sup>to ↑ hazuNta'i ne ↑ f, / # 'o: # / 'a<sup>o</sup>te → hucu:wa<sup>o</sup> mo: → kotondo

必ず にまやかだとはね。 はい どの村でも 普通はもうほとんど

'iNkjoñi<sup>o</sup>asudjomōndza nakara komorānta: ↓ çite → mata 'inakadoke:

'iNkjo ni 'asudjo moN dja nakara komoran ta: ↓ site → mata 'inaka doke:

隠居をして楽しんでるものとなければ ならないよ として また いなかほど:

'itēn → d<sub>3</sub>izo:sānno<sup>o</sup>orāntokanakatane ] f, [#ojo: → dokodēn → ot<sup>o</sup> →

'iteN → dizo:san no 'oran toka naka ta ne ↑ / f, / # 'ojo: → doko deN<sub>3</sub>o<sup>o</sup> →

に行きも 地蔵さまの いないところは ないね そうです どこでもいる

m, "Yes, I suppose it must have been fun in the old days. Once a month on the twenty-third at the Jizō..." f, "It was once every four months - in September, at New Year and in May." m, "January, May and September were always festive. But usually most of the ones who went were retired people with free time. No matter where you go in the countryside you won't find a place without a Jizō." f, "That's right. They are everywhere."

tʃimōnno: ↓] m, [#ū:ŋ doke.ʔitēŋ → ma: → matʔnakaʔorāmbakʔkai

ci moN no: ↓/ m, /# 'uN doke: 'iteN ma: maʔ naka 'oraN baʔka'i

と いうものね うん どこに行、ても 村 町中に いないだけよ

ʔinakadesa:ʔatʔtara ↑ f, [# inaka →. no:ʔomae ] m, [#japʔpa: →

'inaka de sa: 'aʔtara ↑ f, /# 'inaka → no: 'oma'e↑/ m, /# jaʔpa: →

いなかでさえ あたら いなかの ねえ あなた やはり

mukaçinārŋkāŋ → f, [# ŋuŋ ] iwardzarodzāŋ ] f, [#kānsamano

mukahi naNka N → f, /# 'uN / 'iware djaro djaN / f, /#kaNsama no

昔なんかの いわれをしようね。 神さまの

kotʔtʃamōno → nāndēŋ → ʃinenakatʔtʃo ↓ sōnnakodʒa ↓] m, [#kānsama

koʔ cja mono → naN deN → sinenakaʔcjo ↓ soNna kodja ↓ m, /#kaNsama

ことだから なんでも なくてはならないぞだよ。 そんなことは 神さま

dʒaroka: xʔtokesāndʒaroka ʔodassā:jaroka ] f, [#βa:

djaro ka → hotokesaN djaro ka → 'odassan jaro ka↑/ f, /# 'a: <sup>pl.4</sup>

だろうか 仏様 だろうか お大師様 だろうか

kōnūiŋgēnnohanaçi → 'okaçikane: 'iroidrona ] m, [# o: → buʃiŋzindzakēŋka →

koN niŋgeN no hanahi → 'okahika ne: ↓ 'iroiro na ↓/ m, /# 'o: → busiNzin dja. keN

この人の話は おかしいねえ いろいろと ン 不信心だから

xakʔkiwakarāmōŋ ↓ kānsū:dʒanakabatʔtēŋ ↑] f, [#kānsamajakanāŋ

ka → haʔki wakaraN moN ↓ kaNsana dja naka baʔteN↑/ f, /# kaNsama ja kana ↓

か はっきりわからないの 神様 ではない だろうか 神様 じゃね

ʔatʔtōŋ ↓ ʃudza:nānotameçite: → m, [ soçitena: → laughs ] soŋ →

aʔtoN hudja: naN no tame hite → m, /# sohite na: ↓/ soN →

それは 何の ために として

m, "Yes, everywhere. Well, except that there aren't any in the towns -but in the country..." f, "Yes, in the country." m, "I suppose it must be some old custom." f, "Yes, because he's a god (kami) we have to do everything (we can for him). That's what it amounts too."

m, "I wonder if he is a god (kami) or a buddha (hotoke) or a saint." f, "My word you say funny things." m, "Perhaps it is because I'm a non-believer, but I'm not sure about it. I don't suppose he is a god, though." f, "He is a god. Otherwise why would people pray to him."

ōngodat<sup>o</sup>odat<sup>o</sup>sut<sup>o</sup>tot<sup>o</sup>fika<sup>↑</sup> ] m, [# sod<sup>o</sup>dza: → odassā:wanaŋka ↓ ]

ōngoda<sup>o</sup> do da<sup>o</sup> su<sup>o</sup> to ci ka<sup>↑</sup> / m, /# so<sup>o</sup>dja: 'odassan wa nan ka /  
おかんたりどうして)するのをしようか。 ぞれでは お大師様は何だ。

odassā:wa → odassā: ↓ dzizosānna → dzizosānni<sup>o</sup>at<sup>o</sup>tōn ↓

'odassan wa → 'odassan ↓ dizosan wa → dizosan ni 'a<sup>o</sup> toN ↓

お大師様は お大師様 地蔵さまは 地蔵さまですよ。

m, [#jap<sup>o</sup>pa: → xōtokesāŋka → kānsā:niwakenjanarāndzāŋ ↓ ]

/#ja<sup>o</sup>pa: → hotokesan ka → kan<sup>o</sup>san ni wakenja naran djan ↓ /

やっはり) 仏様か 神さまかに分けなければならぬだろう。

f, [# so: dzabat<sup>o</sup>te: → xō<sup>o</sup>jap<sup>o</sup>pa: → ] m, [#sod<sup>o</sup>de<sup>o</sup>dzizo:sānwa dzizo:sānna →

/#so: dja ba<sup>o</sup>te: → no ja<sup>o</sup>pa: → / m, /# so<sup>o</sup> de dizo:saN wa dizo:san na /

ぞうてすけれども やっはり) ぞれで 地蔵さまは 地蔵さま

f, [#xōtokesānna → xotokesāŋ ↓ xōtokewa → xōtoke ↓ mā: → kami → m, [#nānno →

/# hotokesan wa hotokesan ↓ hotoke wa hotoke ↓ mā: kami → m, /#naNno

仏様は 仏様 仏は 仏 神 どうしてどう

dzizosā:naxōtokesāntai<sup>o</sup> ] f, [#<sup>o</sup>inūja: ] m, [#ne:<sup>o</sup>nānno: → kānsā:t<sup>o</sup>fi →

dizosan wa hotokesan ta'i / f, /#iNnja. / m, /#ne:<sup>↑</sup>nāNno: → kan<sup>o</sup>san ci →

地蔵様は 仏様だよ いや ねえ どうしてどうして 神様だろっか

te: tatat<sup>o</sup>ja<sup>o</sup>ogamāŋ mōn → dzizo:sāmba ↓ ] f, [# uwa: → 'o<sup>o</sup>da →

te tatacja ogamaN moN → dizo:saN ba ↓ / f, /# uwa: ↑ o<sup>o</sup>da →

手をたたいてはおかまなもの 地蔵さまを。 まあ ねは

tetata<sup>o</sup>ogānjo ↓ (m, laughs) mo:<sup>o</sup>omaēnsogānju:toga<sup>o</sup>ib<sup>o</sup>bānhēnnakabai ↓

te tata 'ogaN jo ↓ mo: oma'e N sogan ju: to ga'i<sup>o</sup>baN heN naka bai ↓

手をたたいておかみますよ。 あなたが そんな事を言うのが 一番変ですよ。

m, "Well, in that case. What is a saint (taishi)?" f, "A saint's a saint and a Jizō is a Jizō." m, "But you have to divide them into gods and buddhas, don't you?" f, "Yes, that's true, but ..." m, "Then a Jizō....." f, "A buddha is a buddha and a god ..." m, "No, a Jizō is a buddha." f, "No, it isn't." m, "Well, if it is a god, why don't you clap your hands when you pray to a Jizō." f, "What! I do clap my hands when I pray to a Jizō. That's the strangest thing you've said yet."

m, [#o<sup>o</sup>da<sup>o</sup>odosā:<sup>o</sup>et<sup>o</sup>te → tetatatakot<sup>o</sup>anaka<sup>o</sup>jo ↓ ] f, [#ne:<sup>o</sup>od<sup>o</sup>dako:<sup>o</sup>gite →

m, /# o<sup>o</sup>da odosaN<sup>o</sup>e 'i<sup>o</sup>te → te tatata kocja naka jo ↓ / f, /# ne:<sup>o</sup>o<sup>o</sup>da ko:

私は 地藏さまに行つて手をたいた事はなひ。 ね 私はこう

suijo: ↓ m, [#sod<sup>o</sup>dēn → sē<sup>o</sup>kwatataraxotokesā<sup>o</sup>ndzāmō<sup>o</sup>nno:<sup>o</sup>at<sup>o</sup>tō<sup>o</sup>n ↓ ]

hite → su:<sup>o</sup>i jo ↓ / m, /# so<sup>o</sup>deN → se<sup>o</sup>nko wa tatetara hotokesa<sup>o</sup>N dja mo<sup>o</sup>N no:<sup>o</sup>↓

して しますよ。 それでも 線香を立れば 仏様 だもの

f, [#xotokesā<sup>o</sup>ndē<sup>o</sup> → kā<sup>o</sup>nsandē<sup>o</sup> → jap<sup>o</sup>pa:tatsut<sup>o</sup>tokowa →

'a<sup>o</sup>toN f, /#hotokesan deN ka<sup>o</sup>nsa<sup>o</sup>N deN ja<sup>o</sup>pa: tacu<sup>o</sup> toko wa →

ね。 仏様 とも 神様 とも やつぱり (線香を) 立てる ところは

tatsut<sup>o</sup>mō<sup>o</sup>nno:<sup>o</sup> ↓ ]

tacu<sup>o</sup> mo<sup>o</sup>N no:<sup>o</sup> ↓ /

立てますものね。

m, "I never clap when I go to pray to a Jizō." f, "I do it like this." m, "Well offering incense is for buddhas, isn't it?" f, "In some places they offer incense to both gods(kami) and buddhas (hotoke)."

## CHAPTER V

## THE COMPARISON

## 5.0. Introduction

The discussion so far has been concerned primarily with a descriptive analysis of three Japanese dialects. The accounts given in chapters two and three are separate synchronic descriptions. Only in chapter four was any comparison of the phonology of different dialects undertaken. Even in Chapter IV, however, the comparison was merely a device to shorten the description of the various dialects of the Gotō Archipelago by avoiding repetition of those aspects of phonology the dialects have in common and concentrating on features of phonology in which the dialects concerned differ from the Ōhama dialect of Fukue-shi. The descriptions in II, III and IV constitute three separate linguistic analyses.

The study of dialectology, however, may be said to begin at that point where one dialect is compared with another dialect of the same language.<sup>1</sup> It is the intention of this chapter to isolate the phonological characteristics of each of the dialects studied, to examine the different ways in which the dialects deal with various aspects of phonology and finally to see what light a comparison of the phonology of the three dialects can throw on the history of sound change in Japanese.

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<sup>1</sup> See Katō Masanobu, "On'in ni tsuite" 音韻について (On Phonology) in *Hōgen Kenkyū no Subete* 方言研究のすべて (Everything on Dialect Study), Shibundō, Tokyo (1969) p.121.

Despite the general principle of linguistics that synchronic and diachronic studies be kept apart, it is justified in the study of dialect to seek evidence of sound change and historical development through a comparison of synchronic descriptions of several dialects.

#### 5.0.1. Structural Definition of Dialects

In his paper "Is a Structural Dialectology Possible?"<sup>2</sup> Uriel Weinreich suggests that the traditional definition of a dialect as a regional variant of a language is too vague a concept to be useful in the study of structural linguistics. The term 'dialect', he argues, should be replaced by 'variety', a concept seen in purely linguistic terms without reference to geographical, political or social factors.<sup>3</sup>

In as much as they are varieties of a single language, dialects share many structural features. In comparing dialects partial structural differences are the researcher's prime concern. Phonemic differences should be regarded as being of greater importance than phonetic detail.<sup>4</sup> In comparing several varieties of a language, they are arranged into a common diasystem which indicates divergence within basic similarity.<sup>5</sup>

The transformationalists would say that all dialects of a language share the same deep structure. The phonological component of a language, as distinct from that of a single dialect or idelect, must incorporate all the phonemic contrasts of all speakers

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<sup>2</sup> Word 10, (1954) 388 ff.

<sup>3</sup> *Ibid.* p.389.

<sup>4</sup> Weinreich *op.cit.* p.395.

<sup>5</sup> *Ibid.*

of all varieties of that language. That part of the system which is shared by all speakers is the common core phonology. Divergences from the common core are to be explained by the existence of the extensional systems characterizing the dialects involved. <sup>6</sup>

### 5.1-5.1.3. The Synchronic Comparison

#### 5.1. The Phonemes

##### 5.1.1. The Diasystem

The total inventory of the segmental phonemes for the three dialects analysed above has thirty-one members. This may be termed the "diasystem" of the three dialects. By adding more regional varieties to the description, it will be possible to produce the phonemic inventory for the diasystem "Japanese".

In the phoneme inventory for the diasystem which includes the varieties, Tappi (hereafter T), Sakawa (S) and Fukue (F), the phonemes /ε/, /φ/, /ʒ/, /b̃/, /ŋ/, /ã/ and /•/ occur only in T. F and S have /ʔ/, but T does not. /c/ occurs in F and T, but not in S. The diasystem for T, S and F can be shown schematically in the manner proposed by Weinreich. <sup>7</sup> Double slashes indicate sets of phonemes and double tildes phonemic contrasts within the constructed diasystem. Single slashes indicate sets of phonemes and single tildes designate phonemic contrasts within the dialect indicated by the subscript capital letter.

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<sup>6</sup> See Mario Saltarelli, "Romance Dialectology and Generative Grammar", *Orbis* 15 (1966), 51-59.

<sup>7</sup> *op.cit.* 394.

## DIASYSTEM OF T.S.F.

Stops T.S.F. //  $p \approx \frac{T./b\sim\beta/}{S.F. b} \approx \frac{F.T./t\sim c/}{S. t} \approx \frac{T./d\sim\tilde{d}/}{S.F. d} \approx k \approx \frac{T./g\sim\gamma/}{S.F. g} \approx \frac{S. q}{T. \cdot}$  //

Fricatives T.S.F. //  $s \approx \frac{T./z\sim\tilde{z}/}{S.F. z} \approx \frac{T./h\sim\tilde{h}/}{S.F. h} \approx \frac{T. \emptyset}{S.F. '}$  //

Nasals T.S.F. //  $n \approx m \approx N$  //

Flaps T.S.F. //  $r$  //

Non-syllabic Vowels T.S.F. //  $j \approx w$  //

Vowels T.S.F. //  $i \approx \frac{T. /e\sim\epsilon/}{S.F. e} \approx u \approx o \approx a$  //

## 5.1.2. Phonemic Correspondence

The phonemic characteristics of the three dialects can be clearly seen from the diasystem displayed in the diagram above. The diagram, however, takes into account the overall phonemic contrasts in each of the three dialects without taking cognates into account. Those phonemes which occur only in the Tappi dialect can be shown to correspond regularly with phonemes in the other two dialects.

Tappi /ɛ/ always occurs where S and F have a vowel sequence or /' / plus vowel. Phonemic slashes /.../ are omitted below.

	Tappi	Sakawa	Fukue	
(i)	ɛ	a'i	jaa	
	kɛ	ka'i	kjaa	shell



	Tappi	Sakawa	Fukue	
(ii)	ε mɛ́	e'i; e: me:	e'i me'idjo	niece
(iii)	ε ɸutɛ̀	o'i ɸúto'i	o'i; oka ɸutoka	fat
(iv)	ε merú	i'e mi'eru	i'j miju?	to be visible

/ŋ/ which occurs only medially in T usually corresponds to /-g-/ in S and to /-g-/ or /-N/ in F.

	Tappi	Sakawa	Fukue	
	onaŋɔ́ kaŋɪ̀	onágo kági	onago kaN	woman key

Similarly T /ã/ corresponds to S /-d-/ and F /-d-/

	mãðò	madó	mado	window
--	------	------	------	--------

and T /b̃/ S /-b-/ F /b/ or /N/ <sup>8</sup>

	tobú	tobu	toN	to fly
	abúra	ábura	abba	oil

T /ʒ/ S /z/; /d/ F /z/, /N/

	siʒísi	suzúsii	suzuhika	cool
	miʒí	midu	miN	water

The correspondence with /ɸ/ and /h/ is less clear. Generally /ɸ/ corresponds to S and F /h/. There are, however, a number of morphemes where T /h/: SF /h/.

T /ɸ/	:	SF /h/	
ɸɛ́		he'i	wall
ɸecjɔ́		heso	navel

<sup>8</sup> In F /bu/ does not occur medially or finally though some morphemes have final /bi/.

But

T	he	S	ha'e	F	hjaa	fly
	hebĩ		˘hebi			
	haná		hana		hana	nose

/he/ in T is cognate with FS./he/ in some morphemes and with ES, /se/ in others.

T	henága	ES.	˘senaka	back
T	hebĩ	S	˘hebi <sup>9</sup>	snake

Of the other consonant phonemes <sup>9</sup> of F is equivalent to T /C<sup>\*</sup>/, /Ci/ or /Cu/ and S /Ci/, /Cu/ or /q/.

/ʔ/ which occurs only in the environment #; V\_\_\_\_V in S and F does not occur in T.

The remaining twenty phonemes common to all three dialects generally correspond with one another in each of the three dialects with the exceptions that voiceless medial stops and affricates of S and F are often cognate with voiced stops in T. The T voiced stop phoneme often corresponds to F /ʔ/

Tappi	Sakawa	Fukue	
tagè	táka'i	takaka	high
kadà	˘kata	kata	shoulder
kuzi	kútu	kuʔ	shoes

<sup>9</sup> F does not have a true dialect cognate. *Snake* is /karamuhi/.

Tappi final /-si/ corresponds to S /-su/ or /-si/ and to F /-hi/.

Tappi	Sakawa	Fukue	
esi	'isi	'ihi	stone
esi	'isu	'ihi	chair

T /kw/ /gw/ correspond to SF /k,g/

kwási	'okasi	kahi	cakes
gwaNzíci	gaNzitu	gaNzi?	New Year's Day

The phonemic correspondences listed above are found in a large enough number of cognates to be recognised as regular systematic features of the dialects. In addition to these there are many morphemes in which cognates show other correspondences.

Tappi b	Sakawa w	Fukue w	
baráru	waráú	waraa	to laugh
baseredesimoda (completely forgotten)	wasureru	wasuru?	to forget
T b	S h	F h	
bazi	hati	ha?	bee
T m	S b	F b	
simo	hibo	himo	string
kemuri	keburi	kebu?	smoke
T g	S k	F g	
gani	kani	gaN	crab
T ci	S s	F s	
φecjo	heso	heso	navel
T iw	S iw	F uj	
niwa	niwa	nuja	garden

An interesting metathesized form is T /jonomi/ *mugwort* cognate with S /jomogi/ *id.*

Such haphazard correspondences cannot be dealt with in the phonological diasystem. They would have to be incorporated into the lexical analysis.

### 5.1.3. Distribution of Phonemes

The distribution of the phonemes varies considerably in the three dialects. The chart below shows the limitation of distribution of the consonant segments before vowels.

Phonemes

	i	u	e	o	a	ε	ju	jo	ja	wa	we
'10	SF	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT	SFT	T
p	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT		
b	SFT	SFT	SFT	SFT	SFT	T		SFT	SFT		
β	T	T	T	T	T	T		T			
t	S	S	SFT	SFT	SFT	T	S	S	S		
d	S	S	SFT	SFT	SFT	T	S	S	S		
ð			T	T	T						
k	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT	T	T
g	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT	T	
c	FT	F		FT	FT		FT	FT	FT		
φ	T	T	T		T						T
s	SFT	SF	SF <sup>11</sup>	SFT	SFT	T	SFT	SFT	SFT		
z	SFT	SF	SFT	SFT	SFT	T	SFT	SFT	SFT		
ž	T		T	T	T	T	T	T	T		
h	SFT	SF	SFT	SFT	SFT	T	SFT	SFT	SFT		
m	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT		
n	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT		
ŋ	T	T	T	T	T	T	T	T	T		
r	SFT	SFT	SFT	SFT	SFT	T	SFT	SFT	SFT		

<sup>10</sup> In Tappi /' / is replaced by zero.

<sup>11</sup> T medial se is included in /h/.

The Tappi dialect with its larger phonemic inventory has more permissible CV combinations than have the other two dialects. If for the moment, however, the phonemes unique to the Tappi dialect are disregarded, it is immediately apparent that certain of the phonemes of the Tappi dialect are considerably limited in their distribution. The high-back vowel phoneme, /u/ does not occur after the alveolar obstruents. The contrast between /u/ and /i/ after /ʔ/ has been neutralized.

Although not revealed in the chart on the previous page, in the dialects of the Gotō archipelago the high vowels very seldom occur before # except in the sequence /hi/. The few instances when a high vowel occurs in this position are probably due to dialect borrowing.

The /kw/ /gw/ combinations are found in Tappi but not in Sakawa or Fukue dialects, although they do occur in some other Gotō dialects.

Sakawa differs from Tappi and Fukue in the distribution of /t/ and /d/ which may occur before all syllabic vowels (except of course /ɛ/) and /j/. The phoneme /c/ of Tappi and Fukue is in overlapping distribution with /t/. Only /t/ occurs before /e/ and only /c/ in the environment \_\_\_\_\_i, u, but /c/ and /t/ contrast before /a/ and /o/.

#### Consonant Sequences

In Sakawa CC always represents the phoneme /q/ followed by a voiceless stop or /s/, or /N/ followed by an obstruent or nasal phoneme. In Fukue the first phoneme in a CC sequence is /ʔ/, /s/ or /N/. In Fukue /ʔ/ may occur before voiced and voiceless stops.

In Tappi CC sequences are replaced by /C<sup>\*</sup>/. In S and T the only consonant occurring in the environment \_\_\_\_\_# is /N/. In F /ʔ/ also occurs in this position.

#### Vowel Sequences

In S and F, VV usually indicates a geminate vowel sequence. Usually where two dissimilar vowels occur in phonetic sequence /ʔ/ intervenes to give a phonemic CVCV sequence. /ʔ/ may also occur between like vowels V 'V. In Fukue the diphthongs /oi/ and /ei/ in many morphemes are pronounced without interruption and contrast with o'i e'i sequences occurring across morpheme boundaries.

Vowel sequences are fewer in T than in S and F. As there is always a noticeable degree of fusion between the first and second vowel segments even across morpheme boundaries /ʔ/ is not included as a phoneme in T.<sup>12</sup> In Tappi VV is usually /oe/ /ue/ /ao/ /au/.<sup>13</sup> Cognate with geminate vowel sequences of S and F are /V<sup>\*</sup>/ in T. The degree of length varies according to the speed of the utterance, but is usually less than the length of two short vowels.

#### 5.2. Phonetic Differences

In 5.1 only phonemic aspects of the sound systems were examined. These phonemic differences are of primary importance in structural dialectology.

<sup>12</sup> There is some debate as to whether the northern dialects have ' (or ʔ) before vowels. See Tsuzuku Tsuneo "Hondo Hōgen On'in Kenkyū." 本土方言音韻研究 (Phonemic Study of the Mainland Dialects). In *Hōgen Kenkyū no Mondaiten* 方言研究の問題点 (Problems in Dialect Research), Meiji Shoin 明治書院 Tokyo 1970, p.48.

<sup>13</sup> The /au/ is rare - the verb conjugation which gives -au endings in S becomes ru, /udáru/ to sing.

In the three dialects compared, the diasystem was complicated by the phonemic differences in the dialects it embraced. The three dialects are rather divergent varieties. It often happens, however, that two quite separate dialects have identical phonemic structure and can be incorporated into a single simple diasystem with no internal phonemic contrasts. In that case the simplicity of the diasystem might indicate a close relationship between the varieties it contains or, on the other hand, might be obscuring very important differences occurring at the phonetic level. While structural (i.e. phonemic) differences in dialect should be taken as of prime importance in comparative dialectology, phonetic detail must not be ignored.

#### 5.2.1. The Vowels

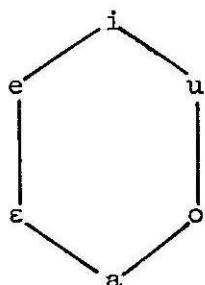
The fact that the Tappi dialect has an additional front vowel /ɛ/ means that the latitude in the area of articulation of the other front vowels is restricted. /ɛ/ is the close vowel [e]. The high vowel phonemes /i/ and /u/ are the central vowels [i̠] and [u̠]. [u̠] is unrounded and tense, further back and slightly lower than [i̠]. [i̠] is higher and further back than [e].

/u/ in Sakawa and Fukue is accompanied by slight lip-rounding and does not seem to be as tense as the Tappi [u̠]. The Sakawa and Fukue /u/ is the high back vowel [u]. The /o/ of Tappi seems to be somewhat lower and slightly more central than that of F and S.

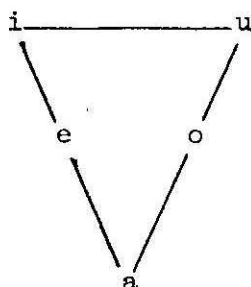
The vowels of Tappi may be compared with those of the other two dialects as in the following diagram.<sup>14</sup> There was no noticeable difference between the vowels of S and F.

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<sup>14</sup> Shibata Takeshi, *Nihon no Hōgen* 日本の方言 (Japanese Dialects) Iwanami Shoten, Tokyo, 1958. Reprint 1967. p.86.



Tappi



Sakawa and Fukue

The non-syllabic vowels /j/ and /w/ are centralized in Tappi to correspond with the position of /i/ and /u/.

#### Devoicing.

The high vowels of Fukue are devoiced in certain environments. The vowels in Sakawa are seldom devoiced.

#### The consonants.

The phonetic differences in consonant sounds is concerned primarily with the palatalized stop and the affricates. The degree of palatalization of stops is strongest in Tappi where it often produces an affricate. This is due to the restriction in the oral cavity through the almost complete closure of the jaws. Movement of the lower jaw was considerably less in the Tappi dialect. Sakawa palatalized segments, and [k] in particular, were often accompanied by strong aspiration.

	Tappi	Sakawa	Fukue
/k/	[kɸ]	[k <sup>h</sup> ]	[k]
in ____ i, j,	[gɸ]	[g]	[g]
in ____ u	[kɸ]	[k <sup>h</sup> ]	[k]
	[gβ]	[g]	[g]



	Tappi	Sakawa	Fukue
/p/ in ____i	[p <sup>ɸ</sup> ]	[p]	[p]
in ____u	[p <sup>h</sup> ]	[p]	[p]
/b/	[b <sup>ɸ</sup> ]	[b]	[b]

In Sakawa /d/ is usually [ˆnd] in medial positions. /g/ in Sakawa is [ˆng].<sup>15</sup> The segments [θ] [ʄ] [t̥] [t̥'] [t<sup>s</sup>] [d<sup>z</sup>] occur in Sakawa but not in Tappi or Fukue. The Sakawa dialect shows a tendency towards fronting of the alveolar obstruents and also tends to avoid affrication. /t/ is dental. /s/ and /z/ tend to be articulated so far forward as to become [θ] and [ʄ]. In some speakers these have become the dental fricatives [s] [z]. Young speakers generally use the alveolar articulation common in most dialects. /se/ and /ze/ become [se] and [dʒe] in Fukue. /z/ in Tappi is [dz]; [z] in Sakawa. Many morphemes with /he/ in Tappi are cognate with forms in /se/ in Fukue and Sakawa. /he/ in Tappi is [ɸe], /se/ in Fukue is [se] and [θe] in Sakawa.

Tappi	Sakawa	Fukue	
/henága/	/ˆsenaka/	/senaka/	
[ɸenaga]	[θenaka]	[senaka]	back

The corresponding voiced phonemes

/kažé/	/kaze/	/kaze/	
[kã <sup>n</sup> dze] 16	[kaʒe]	[kad e]	wind

<sup>15</sup> The prenasalization is especially noticeable in medial positions where the preceding vowel is nasalized and /g/ is [ˆng]. The /g/ in initial position also has a slight prenasal onset. Informants feel the initial and medial /g/ are the same. Similarly they feel no difference between initial [d] and medial [ˆnd].

<sup>16</sup> In some morphemes in the recorded texts [dʒe] occurs in Tappi too. c.f. [kã<sup>n</sup>dze] *wind* and [kã<sup>n</sup>dʒa<sup>n</sup>da] *wind blew*.

/N/ The syllable final nasal of Tappi and Fukue is cognate with the mora consonant [ŋ] etc. in Sakawa. Sakawa /N/ in \_\_\_\_\_# is closer to [ŋ] than the [n] of Tappi and Fukue.

### 5.3. Suprasegmental Differences.

The present study did not reveal any clear differences in the intonation pattern of the dialects studied. This is an area where more research by Japanese scholars is required.

The lexical pitch contrasts, i.e. the phonemic pitch accent, occur in only Tappi and Sakawa. The nature of the difference is phonemic. The most striking factor in the Tappi dialect is that only one syllable of an utterance bears a higher pitch. This high pitched phoneme generally also carries a heavier stress. Heavy stress is apparently used to emphasise those words in an utterance which would not normally carry the accent.

The main differences in the pitch accent systems of Tappi and Sakawa are summarized in the following chart.

Tappi	Sakawa
1) Tappi has two phonemic accents /ˊ/ high level and /ˋ/ high falling.	1) Sakawa has one accent /ˊ/ high level.
2) Tappi has no level pitch contours i.e. all phrases bear an accent mark.	2) Sakawa has level pitch contours, i.e. unaccented phrases.
3) Only one syllable in a pitch contour bears an accent.	3) The high accent span may be of any number of morae.
4) No preaccent.	4) Utterances may be preceded by a phonemic accent indicating following mora is low pitched
5) Disyllabic nouns fall into three pitch contours.	5) Disyllabic nouns fall into four pitch contours.

The types of pitch contours of Tappi and Sakawa in disyllabic nouns are set out below.<sup>17</sup>

Tappi		Sakawa	
óó	/úmi/ sea	óó	'ínu/ dog
oó	/udá/ song	oo	/take/ bamboo
oè	/asè/ sweat	'oo	'umi/ sea
		'oó	'sarú/ monkey

#### 5.4. - 5.4.2. Diachronic Aspects.

##### 5.4.0. Introductory.

It is impossible with such fragmentary material as that afforded by the phonology of three dialect areas to reconstruct the development of sound change in Japanese. As the three dialects chosen, however, represent widely divergent regional varieties it seems likely that some general trends in sound change might be discerned through comparative study.

As it is generally easier to detect historical trends in closely related dialects occupying contiguous distribution the dialects of the Gotō Archipelago are examined first in some detail.

##### 5.4.1. The dialects of Gotō Archipelago and Kagoshima.

Although in Chapter 1V the phonemic systems of several dialects of the Gotō Archipelago were examined no attempt was made to draw inferences regarding the historical development of the dialects. Here the historical implications are examined in some detail. To situate the Gotō dialects into the context of the phonology of the other Kyūshū dialects, the comparison includes the Kagoshima dialect and the dialect

<sup>17</sup> See 5.6. for correspondences in pitch contours and a diachronic discussion of the accents.

of mainland Nagasaki prefecture.<sup>18</sup>

Working on the principle that in sound change generally the tendency is towards simplification, that it is more likely for two separate sounds to fall together than for a single sound to bifurcate to form new ones, the Gotō Archipelago morpheme-final /ʔ/ can be considered a later historical development than the codas /c/ /k/ etc. found in the Yamashita dialect or the morae /tsu//ku//ru/ of the Christian dialects. This does not mean, though, that the Fukue dialect as a whole is more recent than the other dialects in the archipelago. The contrast between /di/ and /zi/; /du/ and /zu/ found in some Fukue-type dialects reflects an earlier stage of development than the contrast between /zi/ and /zu/ in the Christian dialects. It is usual, then, for dialects to retain certain old features of phonology, while making innovations in others.

The fact that sound change is most likely to occur at morpheme boundaries is attested by the treatment of final syllables in the dialects of the Gotō Archipelago and Kagoshima. In the chart which follows, Takegō, a Christian settlement in Miiraku, represents the "itsuki" dialects of the archipelago.

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<sup>18</sup> The material on which the description of the Kagoshima dialect is based is taken from the phonetic transcription of Kagoshima dialect forms given in Hirayama Teruo *Satsunan Shotō no Sōgō-teki Kenkyū*. 薩南諸島の総合的研究 (A Comprehensive Study of the Satsunan Islands,) Meiji-Shoin, Tokyo, 1966. p.327 ff, and Hirayama Teruo *Ryūkyū Hōgen no Sōgō-teki Kenkyū* 琉球方言の総合的研究 (A Comprehensive Study of the Ryukyuan Dialects). Meiji-Shoin, Tokyo, 1966.

Syllable Finals in Kyūshū Dialects<sup>19</sup>

Omura	ki	ku	ci	cu	bi	r(i)	r(u)	gi	gu	ni	bu	mi	mu	si	su
Take-gō	ki	ku	ci	cu	bi	r(i)	r(u)	gi	gu	ni	bu	mi	mu	si	su
Yamashita	k	k	c	c	:	r	r	N	N	N	'u	m	m	s	s
Kurose	?	?	?	?	?	:	:	N	N	N	N	N	N	h	hi
Aokata	?	?	?	?	?	'i	'i	N	N	N	N	N	N	hi	hi
Fukue	?	?	?	?	?	?	?	N	N	N	N	N	N	hi	hi
Kagoshima	?	?	?	?	?	'i	?	?	?	N	?	N	N	s(i)	s(u)

( ) indicates devoicing or loss of vowel : indicates vowel length

It can be seen from the above chart that the dialects of Omura and Takegō have fifteen contrasts in final syllables ending in the high vowels /i/ and /u/ while at the opposite extreme the dialect of Fukue has only three. The tendency towards apocope is apparent, however, even in the Omura dialect where /i/ and /u/ are often devoiced or even lost in rapid speech particularly after /r/.

The Christian dialects and the Omura dialect represent the oldest stage in the phonological changes involving the final high vowels.

There is a progressive reduction in the number of contrasts. In the Yamashita dialect the high vowel is lost in final syllables. This represents the oldest layer of the *daijige* dialects of the Gotō Archipelago. It is interesting to note, however, that the Yamashita dialect has lost

<sup>19</sup> This chart is simplified from *Gotō Rettō no Hōgen*, p.79.

It also appears in Nakamoto Masachie, "K Onkō" 口音考 (Thoughts on the K sound) in *Hōgen Kenkyū no Mondaiten*, p.123.

the high vowel in \*si \*su<sup>20</sup> where the other dialects have retained it, i.e. in /hi/. It seems likely that the vowels \*i and \*u after /c/ and /s/ fell together into [i] before they were finally lost. This is surmised from the fact that /c/ before #is always [tʃ] and never [ts] as would be expected before \*u. Similarly /s/ in the environment \_\_\_\_# is [ʃ].

So,

$$\begin{array}{l} ci \\ cu \end{array} \rightarrow ci \rightarrow c$$

$$\begin{array}{l} si \\ su \end{array} \rightarrow si \rightarrow s$$

The sound change from \*bi to Yamashita : or from \*bu to 'u, is rather perplexing. Perhaps the general Japanese tendency towards the avoidance of voiced unreleased stops (e.g. *bed*<sup>20</sup> > *bet*<sup>20</sup> to *bed* in Tokyo Japanese) mitigated against final /b/ [b<sup>20</sup>] which was replaced by a lengthening of the preceding vowel, e.g. \*jubi > \*jub<sup>20</sup> > \*ju:<sup>21</sup>

The Yamashita codas in /k/ and /c/ could easily have given rise to Fukue /ʔ/.

$$\begin{array}{l} *ki - ki \\ *ku - ku \end{array} \rightarrow k? \rightarrow ?$$

Takegō    Yamashita    Fukue

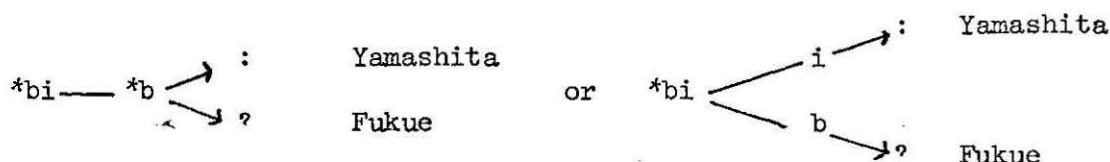
$$\begin{array}{l} *ci - ci \\ *cu - cu \end{array} \rightarrow *ci \rightarrow c \rightarrow ?$$

Takegō    Yamashita    Fukue

20 The asterisk represents the restored original form.

21 The fact that original \*ru has become a long vowel and not 'u is evident from examples such as [ʃi:beta] *backside*, Kojima [ʃib<sup>20</sup>eta] *id.* and Tokyo [ʃippeta] *id.* (possibly from [ʃiri] *buttocks* and [heta] *side edge* c.f. also Tokyo [hoppéta] *cheek* [hoho] *cheek.*)

It does not seem likely, however, that the long vowel of Yamashita cognate with \*bi could have given rise to the ? of the other dialects. The two dialects give different solutions to the problem of how to deal with the coda in b caused by the loss of \*i. This represents the point of departure between the dialects.



The dialects of Kurose and Aokata differ from other Gotō dialects in their treatment of original \*ri and \*ru. As the long vowel of Kurose and the 'i of Aokata could hardly be considered as direct predecessors of the Fukue and general Gotō /?/, they must represent an early off-shoot of the main Gotō branch. The evidence from Ōmura and the Christian dialects suggests that apocope after /r/ preceded the loss of the high vowels after other phonemes. In Kurose and Aokata [r] itself perhaps became unstable and was lost giving forms like \*to'i *bird* even before the tendency towards the loss of final high vowels was established. to'i became to: in the Kurose dialect but continued without further change in the dialect of Aokata. This change occurred before the general loss of the final high vowel so that original \*r was not affected by the shift to ? as it was in the dialect of Fukue.

The Kagoshima dialect displays both of these sound changes where \*ri > i yet \*ru > ?. This may be due to the fact that morpheme final u was lost earlier than i.

The general Gotō dialect syllable-final nasal, /N/, cognate with \*gi, \*gu and \*bu must indicate these dialects are descended from a

variety of Japanese in which these syllables were accompanied by prenasalization. \*to<sup>m</sup>bu > \*tom > to<sup>N</sup>. to fly.

The Kagoshima dialect which, on the other hand, has /ʔ/ for final \*gi, \*gu and \*bu must be descended from a stage of the language which did not have the feature of prenasalization.<sup>22</sup> This is further evidence to support the hypothesis that the dialects of the Gotō Archipelago and the Kagoshima dialects do not lie in a single line of descent, but are separate branches of an earlier common ancestor.

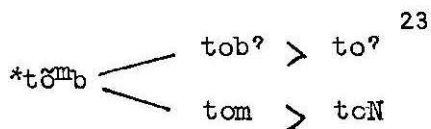
There are several possible explanations as to why the dialects of the Gotō Archipelago show signs of an earlier prenasalized stage while those of Kagoshima do not.

- 1) That prenasalization was lost early in the Kagoshima dialect and had completely disappeared before the loss of morpheme final high vowels.
- 2) That prenasalization developed in the language after Kagoshima had broken away from the main-stream dialects.
- 3) That Kagoshima broke away from the main stream after prenasalization had been lost and that apocope occurred in Kagoshima considerably later than it did in to the Gotō dialects.
- 4) That the dialects of Kagoshima and the Gotō Archipelago broke away from a language which had closed syllables ending in prenasalized voiced stops. Through a linguistic split Kagoshima adopted the stop articulation and Gotō nasalization. This phoneme split may be shown as:-

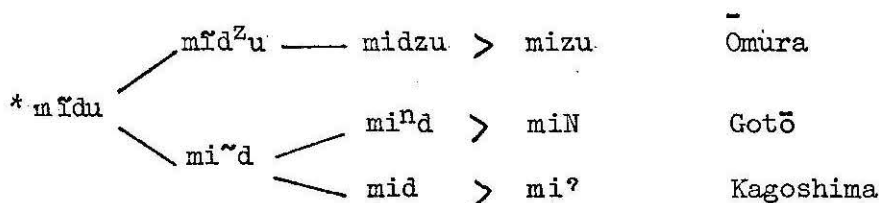
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<sup>22</sup> Gotō Kazuhiko reports prenasalization of b, d, and g in the dialect of Tanegashima in *Hōgengaku-kōza* IV, 271, but except for the presence of ŋ, prenasalization is not given as a feature of Tanegashima in Hirayama's analysis in *Satsunan Shotō no Sōgōteki Kenkyū* p.266, or in Uemura Yūtarō, "Tanegashima Hōgen no Jittai," 種子島方言の実態 (A Description of the Tanegashima Dialect) in *Hōgen Kenkyū no Mondaiten* p.501.





Although not included in the chart above Fukue /miN/ *water* compared with Omura /mizu/ is evidence of an earlier prenasalized \*~z or \*~d.



In some dialects the distinction between original \*du \*zu is preserved in N and hi as in Kabashima kihi *wound*, mimihi *earthworm*, miN *water*. In others both original \*du and \*zu have become N Fukue miN *water*, mimind<sub>30</sub> *earthworm*.

There is no evidence of original voicing of \*zu. Where dialects have morphemes with N for original \*zu it seems likely \*du and \*zu fell together into d<sup>z</sup>u at a time when d was still prenasalized.

The Gotō dialects generally tend to preserve the original nasal vowel as /N/. In the speech of Hiraoka Kaneo, the d<sub>3</sub>ige informant from Hamanokuri in Miiraku, prenasalized voiced stops occurred in some morphemes [ɕ̄ndoroita]<sup>24</sup> *was surprised*, [utango] *to doubt* and [ɕ̄n<sub>3</sub>d<sub>3</sub>inohana] *wisteria*.

It is interesting to note that while \*bu is cognate with general Gotō /N/ \*bi becomes ?.

<sup>23</sup> Inoue explains the evolution of the modern -ŋ- and -g- sounds as a split  $\begin{array}{l} \text{ng} < \begin{matrix} n \\ g \end{matrix} \end{array}$  - "Ga-gyō Shion no Bumpu to Rekishi" 力行子音の分布と歴史

(The Distribution and History of the G-sound), *Kokugogaku*, 86 (1971) p.31

<sup>24</sup> Perhaps this is a dialect loan word. The usual dialect term is [tamagat?].

This is perhaps related to the phenomenon in the Kagoshima dialect in which original \*ri > 'i and original \*ru > ?. The loss of the morpheme final u probably preceded the loss of i. In the Gotō dialects u was lost at a stage when prenasalization of \*b was still a regular feature of the language.

\*tōbu > tō<sup>m</sup>b > toN *to fly* but i persisted until prenasalization of \*b had disappeared.

\*jūbi > jubi > jub > ju? *finger*

The Kojima and Hamanomachi dialects of Tomie have /juN/ *finger* cognate with Ōmura /jubi/. This may be an old layer cognate indicating that the loss of the high vowel after b occurred in these dialects before prenasalization disappeared. The existence of both N and ? cognate with \*bi in these dialects may be due to dialect borrowing. This area, geographically adjacent to the old layer Yamashita dialect perhaps represents an earlier stage of the Fukue dialect.

Apparently the loss of the high vowels at the end of morphemes was taking place at the same time as a change involving the prenasalization of voiced obstruents.

The fact that \*\_bu does not become -N in Yamashita perhaps suggests that apocope in the Yamashita dialect occurred later than in other Gotō dialects, at a stage when prenasalization of b had disappeared, or was at least becoming weaker. This might explain why \*tobu *to fly* did not become to? but tou. Prenasalization of g must have been a feature of Yamashita as \*gi \*gu both become N. Perhaps in Kagoshima the development of the syllable-final ? occurred when prenasalization had been lost

from its final stronghold before *g*.<sup>25</sup>

This seems to agree with evidence from written sources which suggests that prenasalization fell away before voiced stops in the order *z, b, d, g*.<sup>26</sup>

In those Gotō dialects which have *N* for original *\*z*, (as in Fukue mimiN *earthworm*) this can be explained as a falling together of *\*zu* and *\*du* which occurred in a small number of morphemes, before the loss of the final vowel. In the dialect of Fukue *zu* and *zi* (*dzi*) show no evidence of earlier prenasalization. Further they do not lose the high vowel in morpheme final position, e.g. [*ɕidzi*] *elbow* [*suzu*] *bell*. /*zu* [*dzi*] and [*ɕi*] are the only syllables in which the high vowels occur at the end of a morpheme. In some dialects, like Kabashima and Wakamatsu, original *\*z* has become *h* in forms like *kihi wound* and *mimihi earthworm*.<sup>27</sup> The continuants *s, z* and *h* because of their phonetic nature did not become *?* and *z* did not generally become *N* because it lacked the prenasalization which occurred before voiced stops. The high vowels in this position were devoiced but not lost in most of the Gotō dialects. The devoicing usually meant that the contrast between *i* and *u* was lost. In the dialect of Kurose where *i* and *u* were lost after *\*h* and *\*s*, the phonetic nature of /*h*/ is determined by the preceding vowel, e.g. [*ɕ*] *stone* [*uɕ*] *cow* [*kwax*] *cakes* for /*ih*/ /*uh*/ and /*kwah*/.

<sup>25</sup> Another possibility is that prenasalization was not a feature of Old Japanese and that the Kagoshima dialect broke away from the main stream before the advent of the prenasalization of voiced stops. Research into the genetic relationship of the dialect of Kagoshima and those of the Gotō Archipelago might throw light onto the phenomenon of prenasalization in Old Japanese.

<sup>26</sup> Inoue, *Kokugogaku*, 86,36. and Otomo Shin'ichi, *Muromachi Jidai no Kokugo-onsei no Kenkyū* 室町時代の国語音声の研究 (Study of Japanese Phonetics of the Muromachi Period), Tokyo (1963) p.711.

<sup>27</sup> The devoicing of original *\*z* is also reported as a feature of the Kagoshima dialect, e.g. [*niɕi*] *rainbow* (*\*nizi. id.*) K.Gotō, *Hōgengaku Kōza*, 1V, 273.

5.4.2. A Summary of Historical Developments in the Dialects of the Gotō Archipelago and Kagoshima.

Although it would be foolhardy on the strength of the scanty material examined, to reconstruct the chronological relationship of all the dialects of Gotō and Kagoshima, a few generalizations can be made with reasonable certainty.

The closed syllables in ? are a comparatively late development. ? evolved from the devoicing and subsequent loss of high vowels in morpheme final position. The dialect of Omura and the Christian dialects of the Gotō Archipelago are older in this respect than Gotō and Kagoshima. Loss of the high vowels occurred first after r and then after b. u was lost before i. Of the non-Christian Gotō dialects, Yamashita is oldest, i.e. closest to the parent system. The dialects of Kurose and Aokata are probably direct descendants of a dialect with the same phonemic system as Yamashita. The Fukue dialect, the most influential dialect in the Gotō Archipelago, did not develop directly from the Yamashita dialect. Yamashita and Fukue are separate branches of an earlier proto-Gotō dialect.

The dialect of Kagoshima is not in a direct line of descent from (or ascent to) the Gotō dialects. They represent separate offshoots of the mainstream of dialects.

The Gotō dialects are descended from a language which had prenasalized voiced stops. There is no evidence of such a prenasalized ancestor in the Kagoshima dialect.

If prenasalization occurred before \*z, it was lost in the Gotō dialects before the development of the characteristic closed syllables. Prenasalization was then lost after d, b and finally g.

The position regarding the relative age of the Gotō Archipelago and Kagoshima dialects is rather complex. While it is true Yamashita seems to be closest to the "proto-Kyūshū" type, in some respects it is later than Kagoshima. Yamashita has lost all trace of the original i/u distinction while Kagoshima retains the contrast after s and has both 'i and ' for Yamashita r. The sound system as a whole does not change. Changes occur within different parts of the system at different times and at varying rates. A system which in some respects is new may in other respects be old. This can be illustrated by those Gotō dialects which while on the one hand have evolved closed syllables in ' have retained the /di/ /du/ /zi/ /zu/ contrast which has been lost in the otherwise more conservative dialects of Yamashita and the Christian settlements.

#### 5.5. Historical Comparison of Kōchi, Aomori and Gotō Archipelago.

##### 5.5.0. Introductory

This section is concerned with the study of the historical development in Japanese of certain phonological features, through a comparison of the dialects of Kōchi, Aomori and the Gotō Archipelago. The representative dialects of these areas are those described in chapters II, III and IV of this thesis. At several points during the discussion reference is made to the dialects of Tokyo, Kyoto and other areas. It is virtually impossible to attempt to make generalizations about the development of dialects as a whole. At best one can follow the development of a single sound or group of sounds.

Here, as in the section on the Gotō dialects, it is proposed to look at the phenomenon of prenasalization, the neutralization of

certain phonemic contrasts and the development of the change in the pitch accent system.

### 5.5.1. Prenasalization

The phenomenon of prenasalization has been dealt with at some length in the discussion of the dialects of the Gotō Archipelago. This is somewhat surprising as, apart from a very small number of isolated morphemes, the phenomenon itself does not occur in these dialects. It is not possible, however, to follow the evolution of the Gotō Archipelago phonology unless one reconstructs an earlier stage in which voiced stops and fricatives were preceded by a nasal onset.

In the other two dialects studied in this thesis, however, prenasalization can be observed at first hand.

To take the Sakawa dialect first, it soon becomes obvious that the phonetic nature of /g/ lies somewhere between the [ŋ] of the Tokyo dialect and [g] of Kyūshū. It is usually [ʰŋ] though [ŋ] seems to occur as a free variant and one or two cases of [g] occur in the tape-recorded texts. As the prenasalization is entirely predictable it is not regarded as phonemic and the stop is analysed phonemically as /g/. The /d/ phoneme is [ʰd] in medial positions. The degree of nasalization seems to be dependent on the degree of compounding across morpheme boundaries.<sup>28</sup>

The Tappi dialect has strong prenasalization in the segments [ʰm̥b] [ʰn̥d] [ʰn̥z] which occur in contrasting distribution with the voiced

<sup>28</sup> Nasalization is strongest where /d/ is morpheme medial; slightly less when it is the initial phoneme of a bound morpheme and least at the head of a free morpheme [m̥ʰn̥da] /mada/ *not yet*; [hokoʰn̥de] /hokode/ *therefore*; [sonoʰn̥da] /sono da'i/ *that's stand*. "On!inron Kara Mita Kokugo no Akusento," 音韻論から見た国語のアクセント (Japanese Accent Seen from Point Of View of Phonemics). *Kokugo Kenkyū* 2 (1954), p.264.

obstruents [b] [d] and [z] and hence are given phonemic status  
/b̃/ /d̃/ /z̃/.<sup>29</sup>

The voiced stop [g] does not have a corresponding prenasalized stop [ŋ̃], but uses the mediovelar [ŋ] instead. As [g] and [ŋ] contrast they represent two phonemes /g/ and /ŋ/. To indicate the symmetry between the voiced/prenasal groups Tappi [ŋ] might perhaps be better written /g̃/.<sup>30</sup>

Although in most morphemes [b] and [b̃]; [z] and [z̃] occur in complementary distribution, with only z in #\_\_\_ and only z̃ in V\_\_\_V, the presence of intervocalic /b/ and /z/ in reduplications like [bababata] *beating (of wings)* makes it necessary to set up four phonemes /b/ /b̃/ /z/ and /z̃/.

The nature of the prenasalization in Kōchi, then, is rather different from that of the Tōkoku dialects. In Kōchi, too, the non-distinctive prenasalization is gradually being replaced in younger speakers by the phonology of the prestigious Tokyo and Osaka dialects.

The evidence from the Gotō dialect suggests that surds were formerly prenasalized in the Kyūshū dialect. The existence of other widely separated areas, in Kōchi and Tōkoku, with prenasalized surds leads to the assumption that, at very least, the earlier distribution of this phenomenon was far broader than it is at present and may indeed have covered all of the Japanese dialects.

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29 The voiced stops are not in exact complementary distribution with the corresponding voiceless stops. Voiceless stops occur in medial positions in certain onomatopoeia; as long consonants (i.e. before /' / and after voiceless vowels.

30 Note the Tokyo phoneme /ŋ/ could not be analysed this way.

Why then has prenasalization been lost except in Kōchi, Tōkoku and a few other scattered areas?

In the Tōkoku area the shift of the medial voiceless stops \*-k- and \*-t- to -g- and -d- has acted towards the retention of [ŋ] and [ᵑd]. If /ḡ/ and /ḏ/ were to lose their prenasal onset an important phonemic contrast with /g/ and /d/ would be lost. Similarly the tendency for medial c → z has prevented /ʒ/ from becoming [z]. The position with ḃ is less clear. There was nothing in the Tappi material to suggest that original medial \*-p- had shifted to b. Probably the /ḃ/ phoneme could be dropped from the Tōkoku dialects without putting any strain on communication. In other words /ḃ/ is the first of the prenasalized surds to lose its nasal onset.<sup>31</sup>

The prenasalization found in the Kōchi dialect is a survival of an earlier wide-spread system which now having lost its function is doomed to disappear.

It is difficult to say whether prenasalization was a phonemic characteristic of early Japanese or whether it was a secondary feature accompanying intervocalic surds.

There is one school of opinion based largely on document research which holds that prenasalization was a distinctive feature of early Japanese. The oral/nasal contrast, it is claimed, was later replaced by the voiced/voiceless contrast around the time when the influence of Chinese introduced morpheme-initial surds into the Japanese phonology.<sup>32</sup>

31 This was evident from the Gotō material and probably may be taken as a general rule for sound change in Japanese as a whole.

32 See Inoue, *Kokugogaku*, 86, 37. Wenck, *Japanische Phonetik*, IV, 239.



Comparative dialectology alone cannot provide the answer to this question. The evidence afforded through a comparison of the dialects analysed in the present thesis is no doubt open to many interpretations.

In his study of the historical development of the G-sound, Inoue Fumio uses the techniques of dialect geography and textual evidence to show how a phoneme split gave rise to the [ŋ] and [g] of modern Japanese dialects. A more recent change due to dialect contact

$$\begin{array}{l} \text{[ŋg]} \begin{array}{l} \nearrow \text{g} \\ \searrow \text{ŋ} \end{array} > \text{g} \end{array}$$

is now producing [g] from [ŋ] in most dialects.

The original ŋg is to be related to the phenomenon of prenasalized surds. When the nasalization lost its relevance and fell away, the nasal onset was lost except in those central dialects where ŋg had already shifted to ŋ (which for a while coexisted with ŋg as a free variant) before the loss of the nasal on-glide. This area with ŋ being culturally and politically stronger eroded into the older -g- area, but finally the non-phonemic status of ŋ and the tendency towards simplification of the phonemic system by getting rid of a phoneme has reversed the trend so that now ŋ > g is occurring in all dialect areas with ŋ.<sup>33</sup>

This theory is more or less consistent with that provided by the Gotō material except that it is evident that Gotō dialects developed from a prenasalized dialect whereas Kagoshima shows no trace of prenasal ancestry.

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<sup>33</sup> In Tōkoku ŋ > g does not occur as this would bring about a fusion with -g- from original \*-k-.

## 5.5.2. The Vowels

The vowel phoneme /ɛ/ of the Tsugaru dialect is a later development of original vowel sequences [ai] [ae] [oi] [ei]. Gotō /jaa/ is a later metathasised form of original ai. This tendency towards instability of diphthongs<sup>34</sup> is a common feature of most peripheral Japanese dialects. The stabilizing effect of standardization stemming from the cultural and political centre has prevented the breakdown of diphthongs in the Kyoto-Osaka area and to some extent in Tokyo. Even in Tokyo, however, in casual speech the diphthongs ai and oi tend to become [e:] and original \*ei is usually pronounced [e:] even in educated standard speech. In Kōchi the original diphthongs are stable and except for a few morphemes where \*ei becomes [e:] when preceded by a labial consonant, e.g. [me:] *niece* [be.oju.na]. *don't lie.*<sup>35</sup> \*ei is usually [ei] in the Gotō dialects. The relative age of the diphthongs is difficult to ascertain. The Kōchi dialects are closest to the original form, followed by Gotō and then Tsugaru. The /ɛ/ of the Tsugaru dialect has probably developed from a stage with the longer vowel e:. It represents an early break away from the main stream of dialects.

Although not obvious from comparative dialectology alone, written records attest the fact that diphthongs and long vowels are a comparatively late development in Japanese phonology arising first from a weakening of intervocalic w to h followed by subsequent loss -w- > -h- > -ϕ-; and later with the large scale importation of Chinese vocabulary. This change which was easily accommodated by the dialects of the cultural centre was perhaps never fully incorporated into the Tsugaru dialect

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<sup>34</sup> That is taken in the phonetic sense. Most are analysed phonemically as CVCV sequences with /ʔ/.

<sup>35</sup> See Wenck, *Japanische Phonetik*, p.171.

where the lengthening of vowels is weak and diphthongs are avoided.

\*ai, \*oi, \*ei > [ɛ], \*ui, ii > [i]; [i:].

This tendency is particularly noticeable in a category of verbs in which Kōchi has final [-au] cognate with forms in which a consonant has been inserted to avoid a vowel sequence, as in Tappi [ŭdarŭ] to sing against Sakawa [utau] *id.* This avoidance of diphthongs and long vowels is perhaps an indication that the Tsugaru dialect had already broken away from the main stream of Japanese dialects before the full scale importation of Chinese loan words from about the seventh century.

#### 5.5.3. The "4 Kana" Distinction

The Sakawa dialect and several of the dialects studied in the Gotō Archipelago have preserved the old Japanese voiced stop/voiced fricative distinction reflected in the traditional orthography as

シ チ ス ヲ

The distinction occurs before /a/ and /o/ in some morphemes in the Sakawa dialects, but the contrast is gradually breaking down so that [ʒ] and [dʒ] occur in free variation. In the Gotō dialects [dʒ] is usual before /a/ and /o/ though [ʒ] apparently occurs as a rare free variant. The phonetic interpretation of the contrast differs slightly between the two dialect groups.

Sakawa	Miraku (Hamanokuri)	
[ɸu <sup>n</sup> dʒinohana]	[ɸu <sup>n</sup> dʒinohana] <sup>36</sup>	<i>wisteria</i>
[ɸuzisān] (rarely [ɸuɕiθān])	[ɸuzisān]	<i>Mt. Fuji</i>

<sup>36</sup> Some dialects like Tamanoura & Tomie lack prenasalization of dʒ and dz.

Sakawa

Miiraku (Hamanokuri)

[tʃi<sup>nd</sup>h<sup>u</sup>]

[tʃindzu]

[suɣu]<sup>37</sup>[suzu]<sup>38</sup>

The loss of the so-called four kana distinction in most dialects was due to the assibilation of the voiced alveolar stop before the high vowels which brought the auditory effect too close to the voiced pre-palatal fricative in that position. In Kōchi the degree of friction in [dʃ] is noticeably less than the [dʒ] of the Gotō Archipelago dialects. It was, however, never [di] in the speech of Sakawa informants. The contrast dʒ/ʒ in Sakawa was made more conspicuous by the presence of the prenasal on-glide occurring before dʒ.

The degree of affrication before u is far less in Kōchi than in the Gotō dialects. The voiced alveolar stop before u is an aspirated [d<sup>h</sup>] in the speech of older informants. Middle-aged speakers have [d<sup>h</sup>] and [d<sup>z</sup>] in free variation and younger speakers generally have [dz]. The change d > dz is taking place throughout Kōchi at the present time. Similarly the voiced interdental fricative [ʃ] is limited to older speakers. Younger speakers who use [z] are no longer able to make or distinguish the four kana contrast. For these speakers the phoneme contrast is reduced to two /zi/ and /zu/.<sup>39</sup> Consequently the prenasalization which accompanies \*d is lost, first before i and u then before the other vowels.

<sup>37</sup> The form *suzu* occurs in free variation.

<sup>38</sup> In most Gotō dialects \*du > N, i.e. [mɪn] *water*. In Kabashima and Wakamatsu zu > hi and du > N in certain morphemes, e.g. /kihi/ *wound* /miN/ *water*. In several dialects both \*z, \*d > N, e.g. [mɪn] *water* (\*midu *id.*) [mimɪndʒo] *earthworm* (\*mimizū, *id.*) but generally \*du > N, \*di > dʒi, \*zu > zu, \*zi > dʒi (ʒi).

<sup>39</sup> [dʒi] and [zu]. See Doi, *Tosa Kotoba*, p.45 ff.

The "four kana" distinction in the Kōchi dialects where the sound shift of the voiced alveolar stops before the high vowel to voiced alveolar affricates is still in progress, is to be regarded as older than that of the Gotō dialects where the shift is complete. This view is given greater credence by the fact that many of the Gotō dialects, like the Ōhama dialect of Fukue-shi have already lost the distinction.

The tendency towards a breakdown in the original \*di/\*zi \*du/\*zu contrasts is taken a step further in the Tsugaru dialect. The tendency towards strong palatization, often resulting in the generation of a fricative segment, coupled with the fact that the high central vowels no longer contrast after alveolar obstruents, has resulted in a fusion of the four morae into a single /zi/ [dz̥i]. In this respect the Tsugaru dialect is considerably later than Kōchi, Gotō and the Tokyo dialects. The reduction in the number of syllables in the voiced alveolar obstruents is paralleled by a similar reduction in the voiceless obstruents.

Sakawa	Hamanokuri	Fukue	Tappi
tu ti	cu ci	(cu) ci	ci
du di	[dzu] [dzi]	(su) si	
su si	su si		si
zu zi	zu zi	zu zi	zi

These can be arranged chronologically in order of successive

reduction of the number of contrasts.<sup>40</sup> The syllables *cu ci* of Hamanokuri, Fukue and Tappi must be related historically to the *t* phoneme of the Sakawa dialect. In Fukue *su* is restricted to occurrence after #; elsewhere having fallen together with *si* into a single syllable [çi] and [cu] has become ? in all but initial positions. Fukue lies somewhere between Tappi and Hamanokuri. In Tappi the high vowel contrast has been neutralized after alveolar obstruents. Fukue can be regarded as a development of the Hamanokuri pattern. Tappi may have undergone similar changes in isolation or may have developed from another dialect which broke away from the eight-contrast dialects at an early stage.

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<sup>40</sup> Shibata Takeshi classifies all Japanese dialects into three groups based on the treatment of the original combinations of obstruent and high vowel sequence. *Yotsuganaben* 四つ仮名弁

(four kana dialects) *Chūseiben* 中性弁 (Neutral Dialects) and *zūzūben* (the *zūzū* dialects). The four kana dialects retain the eight original contrasts, the neutral dialects have six and the *zūzū* dialects have been reduced to three. Chronologically they can be arranged in the order "four kana" → neutral → "zūzū".

The three types are clearly differentiated in geographical distribution with the four kana dialects occurring in southern Japan and along the Pacific coast (*omote Nihon* 表日本), the neutral dialects with the widest distribution covering all central Japan (*naka Nihon* 中日本) and the *zūzū* dialects occurring along the Japan-Sea coast and in northern Honshū (*ura Nihon* 裏日本). The *zūzū* dialects and the four kana dialects differ from the central dialects in that they have the syllable as the phonemic unit of rhythm (syllabeme dialects). Shibata includes the Gotō Archipelago in the "four kana" dialects. Historically they belong to Shibata's *omote Nihon* group, but have begun to change in the direction of the neutral dialects. "Hōgen no On'in Taikei" 方言の音韻体系 (The Phonemic System of the Dialects), *Kokubungaku Kaishaku to Kanshō*, 25 - 10 (1960) p.84-92.

The sound shift evidently took place over a long period of time in isolation. The Tsugaru dialect<sup>41</sup> appears to have broken away from the main stream of Japanese dialects at an early stage. The presence of central vowels in this dialect may be a heritage of the former eight vowel system of early Japanese.

Examination of the orthography of the *Azuma Uta* (Poems of the Eastern Provinces) indicates that the fusion of the A and B series of vowels occurred earlier here than it did in the central language. If the difference between the A and B series was a contrast between cardinal and central vowels, perhaps the two series had fallen together in the northern dialects in the direction of the central vowels.

In the standard language where the distinction between the A and B series of vowels was preserved longer, the fusion of the two proceeded in the direction of the non-centralized vowels, which were perhaps closer to the sounds of the vast Chinese vocabulary being incorporated into the central dialect of Japanese at that time.

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<sup>41</sup> And the other Tōkoku and Hokuriku dialects with similar phonemic systems.

An interesting problem of the vocalism of the Tsugaru dialect is the tendency towards the neutralization of /i/ and /e/ in initial position. In the material collected only one morpheme, /irò/ [irò] *colour* was consistently pronounced with initial /i/ by all informants. The informant, Narita Kamekichi, eighty-four, pronounced /idâ/ *board*, /inù/ [inù] *dog*, /irò/ [irò] *colour* and /ibi/ [i<sup>h</sup>mbzi] *finger* with initial i. Other informants seemed to use e for these or to vary between e and i. As /ibi/ is cognate with Tokyo dialect *jubi*, it seems possible that those forms in initial i in Tappi may go back to an original \*ji.

#### 5.5.4. Devocalization and Apocope

In 5.4. it was seen how a tendency towards the devocalization of the high vowels ultimately lead to the development of the phoneme /ʔ/ in the Gotō and Kagoshima dialects. The phenomenon is common in the dialect of Tokyo where high vowels occurring between voiceless consonants or after voiceless consonants and before pause are devoiced. In rapid speech the other vowels are also often devoiced in these environments: e.g. [k̚okoro] *heart*, [k̚akanai] *not write*, [p̚etʔt̚aŋko] *flat*.

In Tappi the high vowel /i/ is devoiced in the text on the occasions it occurs between voiceless consonants [s̚ikaradz̚i]; [sos̚ite] [sitabate]; [sitade], [xan̚kak̚use], [tas̚ika] [kos̚ite]. The tendency towards voicing of original voiceless stops means that voiceless consonants rarely occur



medially so that devoicing is not an important feature of Tappi phonology. Devoicing is not a feature of the Sakawa dialect. It is obviously a later development.

## 5.6. The Historical Development of Pitch Changes.

### 5.6.1. Pitch Contours in Disyllabic Nouns.

In the pitch contours of disyllabic nouns seven sets of correspondences between Sakawa and Tappi may be established as follows. Phonemic slashes /.../ are omitted in the representation of pitch contours.

	Sakawa		Tappi		
1.	ˊ00	[00▲]	ˊ00	[00]	
	/ˊumi/	[umi]	/ˊumi/	[umi]	sea
	/ˊ'iki/	[iki]	/ˊ'egi/	[egi]	breath
	/ˊ'obi/	[obi]	/ˊ'obi/	[ˊ'ombi]	sash
	/ˊhasi/	[hasi]	/ˊhasi/	[hasi]	chopsticks
2.	ˊ00	[00▲]	0̀	[00]	
	/ˊkasa/	[kaθa]	/kasà/	[kasà]	umbrella
	/ˊkata/	[kata]	/kadà/	[kadà]	shoulder
	/ˊsora/	[θora]	/sorà/	[sorà]	shy
	/ˊ'awa/	[awa]	/awà/	[awà]	millet
3.	ˊ00	[00▲]	ˊ00	[00]	
	/ˊturú/	[thuru]	/círú/	[tsirü]	crane
	/ˊsarú/	[θaru]	/sáru/	[sarü]	monkey
	/ˊharú/	[haru]	/háru/	[harü]	spring
	/ˊ'akí/	[aki]	/ˊ'agi/	[agi]	autumn

	Sakawa		Tappi		
4.	ˈOO	[OOΔ]	OO	[OO]	
	/ˈoké/	[oke]	/ogè/	[ogè]	bucket
	/ˈasé/	[aθe]	/asè/	[asè]	sweat
	/ˈmukó/	[muko]	/mugò/	[mügò]	bridegroom
	/ˈmadó/	[mã <sup>n</sup> do]	/madò/	[mã <sup>n</sup> dò]	window
5.	OO	[OO]	OO	[OO]	
	/ˈínu/	[inu]	/enù/	[enù]	dog
	/ˈíro/	[iro]	/irò/	[irò]	colour
	/ˈasi/	[asi]	/asì/	[asì]	leg
	/kúsa/	[kuθa]	/kusà/	[k <sup>φ</sup> wsà]	grass
6.	ˈOO	[OO]	OO	[OO]	
	/ˈuta/	[uta]	/udá/	[w <sup>ː</sup> da]	song
	/téra/	[tera]	/terá/	[tera]	temple
	/hási/	[hasi]	/hasí/	[hasí]	bridge
	/nátu/	[nat <sup>h</sup> u]	/nazi/	[nadzi]	summer
7.	OO	[OO]	OO	[OO]	
	/take/	[take]	/tagé/	[tagé]	bamboo
	/kubi/	[kubi]	/kubí/	[k <sup>φ</sup> w <sup>ː</sup> m <sup>ː</sup> bzi]	neck
	/ˈusi/	[usi]	/usí/	[wsí]	cow
	/ˈika/	[ika]	/egá/	[ega]	squid

The contrasts are summarized in the following chart.

	Sakawa	Tappi
1	ˈOO	OO
2	ˈOO	OO
3	ˈOO	OO
4	ˈOO	OO
5	ˈOO	OO
6	OO	OO
7	OO	OO

While within the pitch accent system of the Tappi dialect it is necessary to make head-high accent phonemic<sup>42</sup> the comparison here reveals that groups 1,2,3 and 4 of Tappi fall into a single pattern 00 with the phonetic variant, or allotone,<sup>43</sup> [00] which occurs where the second syllable contains a high vowel. This 00, however, overlaps somewhat with 00 in contrast 5, which has no restriction against the occurrence of a falling accent on a high vowel. To explain the correspondences between the four Sakawa tonemes and three Tappi tonemes it is necessary to reconstruct an earlier stage with five contrasts.

	Sakawa	Tappi
1	ˈ00	00̇
2	ˈ00̇	(00̇)
3	ˈ00	-----
4		00̇
5	00	

Sakawa distinguishes /'áwa/ *foam* and /'áwa/ *millet* whereas in Tappi they are homophones /awà/. On the other hand Tappi has /kam̃/ *hair* and /kamí/ *paper* contrasting where Sakawa has only /kámi/ *hair; paper*.

Although the Sakawa dialect which has retained more of the original pitch contrasts is obviously closer to the common ancestor dialect than is the Tappi dialect, Tappi and the other northern dialects cannot be

42. To explain the pitch contrast between [as̃] *leg* and [has̃] *chopsticks*

43. In analogy with allophone. An allotone is an environmentally conditioned variation in the pitch contour (toneme).

44. Japanese scholars reconstruct a 5 pitch contrast system for two mora nouns, based on the Heian dictionary Ruijūmyōgishō 類聚名義抄. The usual Japanese arrangement of the five groups is 1 (number 5 of chart); 2 (4); 3 (3); 4 (1) and 5 (2). See Hirayama, *Nihongo Onchō no Kenkyū*. p.67.

direct descendants of a dialect with the Kōchi type pitch accent system, (of which Sakawa is a representative example), as they distinguish groups 3 and 4 which do not contrast in Sakawa. This is further evidence that the dialects of northern Japan broke away from the mainstream of central dialects at an early stage in the development of the language. The accent of the northern Ōu dialects (represented here by Tappi) probably started to develop independently about the time grammatical particles like *ga*, *wa*, and *o* dropped out of the dialect. The original distinction separating pre-accented forms into two groups depending on whether the following particle was high or low pitched was lost. Possibly these became initial-accented but gradually a tendency in sentence intonation towards a terminal rise in pitch attracted the pitch towards the second syllable. The incomplete shift from the first to the second syllable accounts for the falling accent ˘. Only where the peak of the second syllable was a high vowel did the accent remain on the first peak. In the Northern Ōu dialect the pitch span became limited to a single vowel in a breath group so that prominence (which is more difficult than pitch to maintain over a continuous span) became an integral part of the accent.<sup>45</sup>

From a comparison of only two dialects it is difficult to predict the phonetic nature of the original accent. Tappi which has two accents ˘ and ˘ and Kōchi which has preaccent differ phonemically.

It may perhaps be assumed that the Tappi type of accent developed later in isolation and that the Sakawa accent is closer to the original. From the evidence of these two dialects alone then, the phonemic nature of the language which gave rise to both might have been:-

<sup>45</sup> The weakening of the auditory effect of the vowel in closed syllables in the syllabeme dialects may lead to prominence replacing pitch. Umegaki Minoru, "On'in" *Hōgengaku Kōza*, 1, 58.

- |    |      |                            |
|----|------|----------------------------|
| 1. | ˆ00  | <u>umiga</u>               |
| 2. | ˆ00  | <u>saruga</u>              |
| 3. | 00   | <u>inuga</u>               |
| 4. | * 00 | <u>utaga</u> <sup>46</sup> |
| 5. | 00   | <u>hanaga</u>              |

Perhaps in Kōchi the height of the following particle was an important factor, groups three and four both with initial high syllable and a low particle fell together early.<sup>47</sup>

In the Aomori dialect the distinction between one and two and four and five being dependent on the height of the following particle (which had since fallen into disuse in the dialect) was lost and the four groups fell into two, probably kept quite distinct by making one head high and the other tail high. The intonation pattern attracting high pitch to the end of the utterance brought the high pitch back slightly but not so far as to make it indistinguishable from the true "tail-high" group. Only those words with a high vowel as the peak of the second syllable resisted this change. Groups three and four which did not involve the height of a following particle remained distinct. In this case, too, perhaps the distinctive falling accent evolved through the movement of the accent towards the second syllable peak.

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<sup>46</sup> If the original language followed the same phonemic system as Sakawa \*00 would fill the gap as the last possible combination of two-mora contours. Historical records suggest that in fact the additional contour was phonetically [00] low level accent. This could not be incorporated into the Sakawa type accent system and cannot be reconstructed through a comparison of the dialects studied here.

<sup>47</sup> Perhaps 4 fell together with 3 and not 2 because of a phonetic tendency to pronounce initial high pitched morae higher than subsequent high pitched morae. Even in Tokyo the initial mora of #háfi# chopsticks seems somewhat higher than the second mora in #hafí# bridge.

## 5.6.2. Kagoshima and the Northern Ōu Dialects

The fact that the Kōchi dialect and the dialects of the Northern Ōu area represent two long separated branches of Japanese may be demonstrated through a comparison with other dialects. As the dialects of the Gotō Archipelago have lost phonemic accent the Kagoshima dialect, which is otherwise very similar phonologically, is described here. Kagoshima dialect distinguishes only two tonemes, final accented and penultimate accent.<sup>48</sup> As in the Aomori dialects high pitch occurs on only one syllable peak in a pause group. The dialect also resembles Aomori and the other Northern Ōu dialects in having the syllable as the phonemic unit of rhythm. When the disyllabic noun contrasts for Kagoshima are added to the comparison of Sakawa (Kōchi) and Tappi (Northern Ōu) it can be seen that the division between final pitch and penultimate pitch occurs between groups three and four. That is to say that Kagoshima with only two pitch contrasts distinguishes morphemes which have become homophones in the Kōchi dialect; e.g. Kagoshima /kamí/ *hair*; /kâmi/ *paper*, compared with Kōchi /kâmi/ *hair*; *paper*.

Kagoshima and the Northern Ōu dialects, then, show a remarkable correspondence in accent contours. Japanese scholars usually divide accent into two main groups, the Tokyo-type accents and the Kyoto-type accents. Kagoshima is generally assigned to the Kyoto group.<sup>49</sup> It seems more likely that Kagoshima in the south and Northern Ōu in the north are remnants of an old break away from the original system and owe nothing in their development to either the Kyoto or Tokyo groups.

<sup>48</sup> Hirayama Teruo, *Kyūshū Hōgen Onchō no Kenkyū* 九州方言音調の研究 (A Study of Pitch in the Kyushu dialects), Gakkai no Shishinsha, Tokyo (1951) p.38.

<sup>49</sup> Hirayama, *Nihongo Onchō no Kenkyū*, p.132 and (Kenkyū), p.140.

The Kyoto dialect and its direct descendants the Tokyo type dialects rapidly encroached on and finally sundered the area of the old offshoot accent so that the pitch accent systems of Kagoshima and Northern Ōu developed somewhat differently in isolation.

The accentless dialects in the area adjacent to Northern Ōu and Kagoshima dialects, then, evolved separately from the falling together of the two contrasts. Those areas with unstable and vague accent distinctions are only now going through this final stage. They are descendants not of the Tokyo accent family but of a much earlier branch which tended to lose the accent contrasts more quickly than the Kyoto dialect.

The dialects of Nagasaki, Ōmura and the Christian dialect of Narujima belong to the Kagoshima type accent. Professor Hirayama includes the Kagoshima accent in the Kyoto-type accent group yet maintains that historically it developed from the Tokyo-type (type 3) accents of north-eastern Kyushu.<sup>50</sup> The Tokyo dialect distinguishes three pitch contours in disyllabic nouns. Sakawa pretonic forms fall together into Tokyo "head-high" accent, e.g. Sakawa /<sup>ˈ</sup>'umi/ Tokyo /'úmi/ *sea*; Sakawa /<sup>ˈ</sup>sarú/ Tokyo /sáru/ *monkey*.

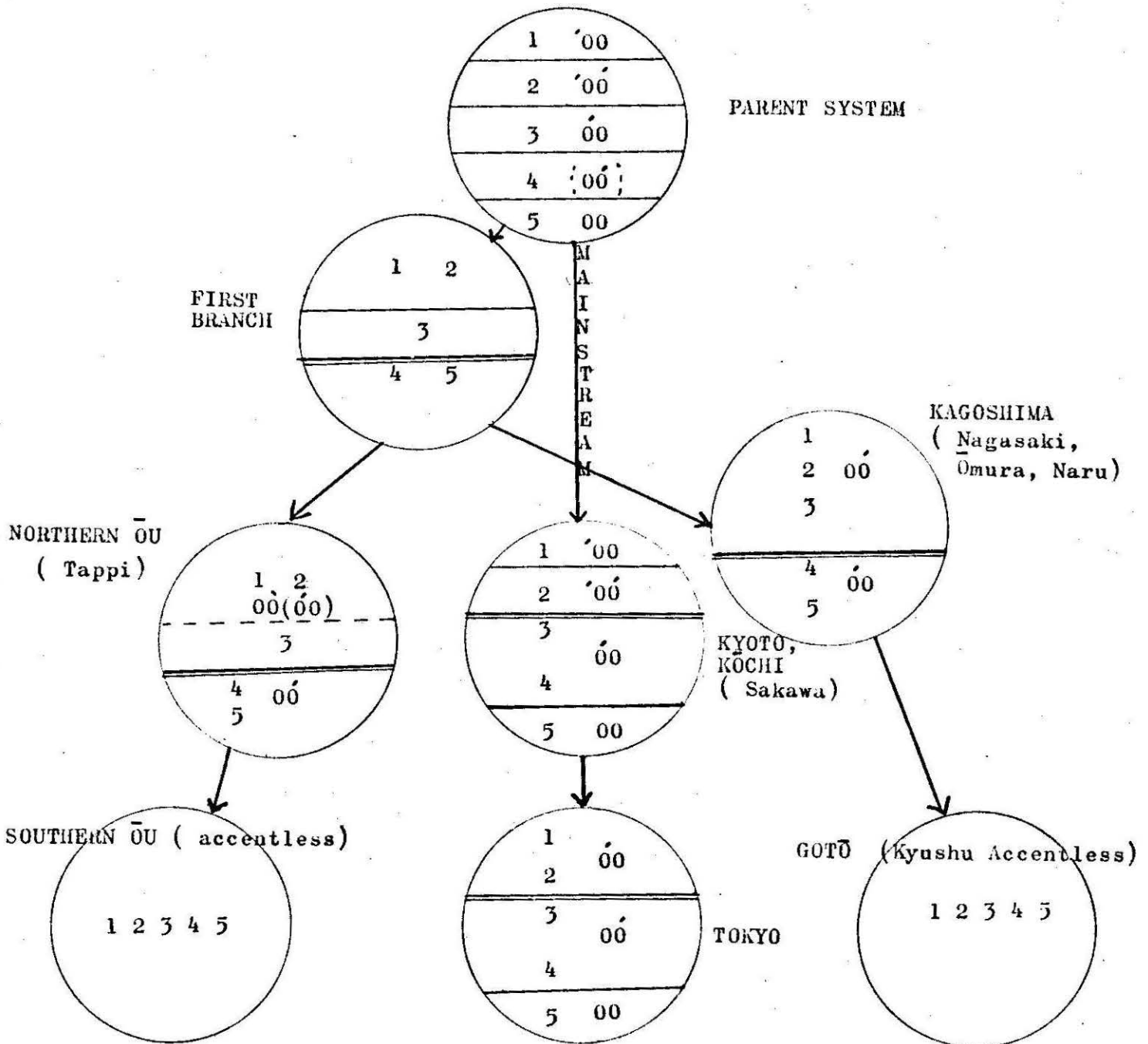
### 5.6.3. The Historical Development of the Japanese Accents

From the examination of correspondences in the pitch contours of lexical items it appears that the hitherto accepted interpretation assigning the Northern Ōu pitch accent to the Tokyo type accent group and Kagoshima and Nagasaki to the Kyoto type is at least open to question.

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<sup>50</sup> Hirayama *Nihongo Onchō no Kenkyū* p.141.

A diagrammatic representation of the evolution of the pitch accent system of the Japanese dialects based on the grouping of disyllabic nouns into pitch contours, appears below. Numbers in the diagram refer to divisions in the parent system.





Both branches are progressing towards fewer accent patterns, but the breakdown has been faster in the Kagoshima-Ōu line. The accentless dialects seem to occur most often at the borders of different accent systems.

A very tentative statement of this theory regarding the evolution of the accent contrasts in mainland Japan (i.e. excluding the Ryūkyū Islands) is put forward here as a basis for further investigation.

From a language with complex pitch contrasts a regional variety evolved which, through changes in syntax or phonology, simplified the original accent contrast until they were reduced to two. This dialect had a wide distribution stretching from northern Honshū to southern Kyūshū and probably covering most of Japan except the central Kinki and inland-sea area. The early branch was gradually eroded into by the more conservative central dialect which had preserved the original accent contrast. As the dialect retaining pitch contrasts was the language of the political and cultural centre, it spread with the extension of central authority until it had cut the territory of the earlier branch into two discontinuous areas. At about the same time in the main branch, especially in areas away from the political centre, there arose changes in the original accent system caused perhaps by contamination with the other dialect. The original five-contrast accent gradually became reduced to four contrasts at the centre and three in areas to the east and west of the central dialect. In the meantime the remnants of the old layer dialect had undergone independent sound changes which led to differences in accent and the rise of dialects with no accent contrasts at all.

The *djige* dialects of Gotō Archipelago perhaps represent an independent development from a Kagoshima-type dialect. In the Christian dialects introduced from the mainland it seems likely that the trend towards loss of accent already occurring on the Kyushu mainland was accelerated by the fact that the Gotō dialects had already lost their accent. In the Christian communities of Naru the numerical superiority of speakers with phonemic accent was great enough for the accent distinction to remain until the present day. The last remaining contrast will probably be lost within the next generation.

The genealogy of the dialects given above is based only on pitch contours in two-syllable nouns and would have to undergo several modifications before it could be regarded as an explanation of the development of the present-day pitch contrast system as a whole. It cannot be taken as an explanation of the evolution of the Japanese dialects in general.

Sound change occurs at different rates and different times. Old features may be retained alongside new developments. It is difficult therefore to say whether a certain dialect is older than another. The relative age of the Japanese dialects is open to several interpretations depending on what phonological features are taken as the point of comparison. If lexical and syntactical features are also included in the comparison the result is such a confusion of conflicting evidence it is virtually impossible to reach any conclusion at all. One phonological feature must be dealt with at a time.

Tōjō Misao's insistence that dialect systems should be compared, while theoretically ideal, is a practical impossibility.

5.6.4. A Theory on the Evolution of the Japanese Pitch Accent Contrasts -  
A Summary

Certain correspondences in the allocation of lexical items to pitch contours found in the dialects of northern Honshū and southern Kyūshū, do not occur in the dialects of central Japan. The correspondences are so numerous and systematic they cannot be the result of isolated developments, but are evidence of an earlier contiguous distribution or development from a common ancestor. To assign the northern accents to the Tokyo-type pitch contrasts and the Kagoshima pitch accent to the Kyōto-type conceals the relationship between the northern and southern pitch contrasts. The Japanese accent should be divided into two main groups, the Kagoshima-Ōu accent and the Kyōto-Tokyo accent. Kyōto-Tokyo is structurally closer to the parent system but the Kagoshima-Ōu pitch contrast covered a large area of Japan before it was split into two by the Kyōto-Tokyo dialects. The accentless dialects in Kyūshū and in northern Japan evolved from the simplified Kagoshima-Ōu pitch accent, hastened perhaps by contamination with the different Kyōto-Tokyo system.

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51 This theory was not encountered in the Japanese material scrutinized by the present writer, but may occur somewhere in the prodigious literature on the subject. An article by Tokugawa Munemasa 徳川宗賢 on a new theory of the genealogy of the Japanese accent was unavailable.

"Nihon Shohōgen Akusento no Keifu-Shiron" 日本諸方言アクセントの系譜試論  
(A Genealogy of Accent in the Japanese Dialects - A Tentative Account).  
*Gakushūin Daigaku Kokugo Kokubungaku Kaishi* 学習院大学  
国語国文学会誌 (Gakushuin University Journal of Japanese  
Language and Literature) 6. - quoted in Maeda Tomiyoshi, "Akusento-shi  
Kenkyū to Hōgen Akusento Kenkyū" アクセント史研究と方言アクセント研究  
(Accent-history study and dialect-accent study)  
*Hōgen Kenkyū no Mondaiten* p.930.

Professor Roy Andrew Miller in his *The Japanese Language* suggests that the accentless dialects occurring in two separate belts in northern Honshū and central Kyūshū may represent survivals of an early contiguous distribution of accentless dialects which were later eroded into and finally completely sundered by a later group of dialects which had phonemic pitch accent.<sup>52</sup> While this would explain the geographical distribution, it does not take into account the breakdown in the pitch contrasts found in many dialects today. The tendency is always towards a reduction in the number of phonemic pitch contours. In many areas, such as in the Christian dialects of the Gotō archipelago, the evolution of accentless dialects from dialects with phonemic pitch can be clearly demonstrated. Given the minor part Japanese accent plays in keeping lexical items apart it is doubtful that a dialect once having lost phonemic pitch would unduly complicate its phonemic system by reabsorbing a complicated accent system which is of minimal use in improving communication. The historical shift from complex to simple seems to apply to the evolution of Japanese accent.

Nevertheless, it is difficult to explain the existence of two widely separated belts of accentless dialects as a consequence of "contamination" and "careless pronunciation" alone. This interpretation is particularly suspect as there are dialects which retain their pitch contrasts in northern Japan and southern Kyūshū although they are virtually cut off from the main pitch systems of central Japan by the accentless dialects. If, as in the theory proposed here, the northern Ōu dialects and the dialects of southern Kyūshū are regarded as remnants of an earlier branch in the pitch contrasts and the accentless

dialects are seen as developments of this old layer, the distribution of the accentless dialects is easily explained. The accentless dialects may have evolved when the "two-contrast" dialects were contaminated by contact with the dialects of central Japan. The area of the Kagoshima-Northern Ōu dialect may have had more than two pitch contrasts (in two syllable nouns) at the time when it was eroded into by the mainstream of central Japanese dialects. Because phonemic pitch already existed in the dialect there was little resistance to the spread of the central Japanese pitch accent system. The central system and the old layer Kagoshima-Northern Ōu dialect underwent modifications in their lexical pitch systems with the old layer moving more quickly towards the loss of phonemic pitch.

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JAPANESE	MAINLAND DIALECTS	Pitch accent. CV, CVC syllable structure. Agglutinative. Qualifying words precede words qualified. Subject - Object - Verb word order. Nouns uninflected. Verbs, adjectives inflected. Honorifics. Common lexicon.	RYÜKYÜ DIALECTS	/i/ and /u/ cognate with mainland /e/ and /o/ Verbs in -un. Adjectives in -an	Amami - Okinawa Sakishima	Amami i and e Okinawa No central vowels Miyako Yaeyama Yonaguni
			HACHIJÖJIMA DIALECT	Verbs used attributively end in -o, e.g. [jomo hon] (the book [I] read) Adjectives used attributively end in -ke, e.g. [akake hana] (red flower) /p/ occurs [pakku] (to wither, dry up) pjome (chicken). Are, ware (1st person singular pronoun)		
	EASTERN DIALECTS Consonants strong. Devocalization of vowels. Imperative -ro, e.g. okiro (get up!) Intention -be, e.g. ikube: (let's go) Negative -nai, Neg. Conditional -nakereba Tokyo-type or non-contrastive pitch accent Geminate consonants in past of -u verbs, e.g. kau → katta (bought) Continuous -te iru; Copula da, ototoi (day before yesterday); ikura (how much?) suppai (sour) dareka (someone); kariru (to borrow); kusurijubi (index finger). Diphthongs unstable ai → e:	WESTERN DIALECTS Imperative -yo, e.g. okiyo (get up!) Intention -oi, e.g. iko: (let's go!) Negative -n, Negative conditional -neba Continuous -te oru Copula dza (ja) Past tense of -u verbs have long vowel e.g. ko:ta (bought); Adjective-adverbs in -: e.g. yo: naru (become good), mutsuka: naru (become difficult) S → h, Ø uedahan (Mr. Ueda) daita (put out) hanaita (spoke) ototsui (day before yesterday), nambo (how much?) darezo (someone), karu (to borrow) benisajubi (index finger) akai 'red', 'bright'	EASTERN DIALECTS	TÖHOKU Central vowels [i], [u], /e/ is [e]. Fusion of initial /e/ and /i/. Voiced medial stops cognate with Kanto voiceless medials. e.g. [kagaku] (to write) Prenasalized medial stops cognate with Kanto voiced medials. e.g. [mä'dö] (window) si/su zi/zu ti/fu contrasts, neutralized Modified Tokyo accent in north (Kita Ou). Non-contrastive in south.	KANTÖ Five vowels (some fusion of /i/ and /e/). Devocalization of vowels between voiceless stops. Use of be: expressing intention or conjecture ai, oi, ei → e: -ra syllable often assimilated, e.g. wakanne: (don't understand) Tokyo accent. Kara used for (because). Medial /-g-/ is [-ŋ-]	TÖKI - TÖSAN -dzura for conjecture, e.g. [amega:burudzura] (it will probably rain) dzu for intention, e.g. [ikadzuz] (let's go) -de (because) ai → [æ:]
HOKURIKU			Kyoto-type accent. Central vowel [i] occurs. Confusion of [ɸ] and [k] [ɸasi] (cakes), [kune] (boat). In Fukui voicing of medial /-k-/ e.g. [nego] (cat)			
KINKI			Five clear vowels. /u/ is [u] (slight lip rounding). No devocalization. Diphthongs /ai/, /oi/ stable. Consonants weak. Negatives in -n, -hen. Copula [ja]. Negative potential prefix ei (yo:) e.g. yo:kakan (can't write) Kyoto accent.			
SHIKOKU			Except for Köchi like Kinki - slight differences in lexicon. Sentence final particle no: . Copula [dza] kwa- gwa- e.g. [kwadzi] (fine) [gwandzitsu] (New Year's Day) - but not in Köchi. Köchi '4 kana' [ɸuziθäŋ] (Mt. Fuji) [ɸu'd:inohana] (wisteria), [suöu] (bell), [tsindzu] (map). Kyoto accent.			
CHUGOKU			Tokyo-type accent. /ai/ → [e:], [æ:], [a:], [ja:] Medial /-g-/ never nasal. Copula [dza]. arimasu commonly used. Ke (because)			
IZUMO			Modified Tokyo-type accent. Central vowels. Confusion of /i/ and /e/ e.g. [esi] (stone), [eno] (dog). Honorifics highly developed. Western Japan vocabulary.			
EASTERN			Tokyo-type accent. kendo (but) kii (because)			
WESTERN			Accent, two pattern (modified Kyoto type) or non-contrastive. [batten] (but), [ken] (because) -ka suffix for adjectives [yoka] (good)			
SOUTHERN			Two pattern accent. [don] (but) [de] (because). Closed syllables n/?/ e.g. /ka?/ (to write). No diphthongs or long vowels [ake] (red) [iri] (white). '4 kana'			
			KYUSHU DIALECTS	-u stem "bi-grade" verbs e.g. ukuru (to receive) haruru (to become fine); sinuru (to die) devocalization of vowels don (Mr. etc) ei diphthong occurs e.g. keisatsu (police) /se/ → [se] /ze/ → [ze] gotaru		

Summary of JAPANESE DIALECT DIVISIONS - BASED ON. HIRAYAMA TERUO Nihon no Högen, Kōdansha 1969

UNIVERSITY OF SYDNEY  
FACULTY OF ARTS  
DEPARTMENT OF ORIENTAL STUDIES

THESIS

THE PHONOLOGY OF THREE JAPANESE DIALECTS

HUGH D.B. CLARKE

In Fulfilment of the Requirements for the Degree of  
DOCTOR OF PHILOSOPHY

February 1973

