Some problems in the phonology of Old Japanese reconsidered in the light of comparative evidence from the Amami dialects

by

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Submitted in partial fulfilment of the requirements for the degree of PhD

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August 1989

ABSTRACT

This thesis focuses on the most controversial phonological problem in Old Japanese, the phonetic and phonological status of two types of syllables, found in written texts, known as the 'A/B-type' contrast.

Previous approaches have centred around the phonetic evaluation of Middle Chinese characters, and examination of Pre-Old Japanese diphthongal sources reconstructed through the morpho-phonemic analysis of Old Japanese.

All of these approaches have various limitations, since Old Japanese does not provide sufficient evidence to support the results thus gained.

Recently attempts have been made to apply study of the Ryukyu dialects to the problem. In particular linguists have claimed that the Modern Amami dialects reflect the A/B-type distinction. The importance here lies in the fact that study within this field can provide firm empirical evidence.

The present thesis, therefore, aims at shedding light on the A/B-type distinction by a study of the Modern Amami dialects, specifically by the reconstruction of the phonemes of Proto-Amami.

Chapter One is an introduction, containing the argument in favour of undertaking this line of research, with details of the survey and informant information.

Chapter Two contains a review of the Old Japanese A/B distinction, plus a survey of previous works in the field by Hashimoto, Arisaka, Lange, Unger, Ōno, Matsumoto, Mori, etc. Problems to be dealt with in the present work are isolated.

Chapter Three discusses the Ryukyu dialects, and focuses in on the importance of the Amami dialects. It concludes with a synchronic overview of the Amami dialects.

Chapter Four contains the reconstruction of Proto-Amami phonemes, a synchronic discription of Proto-Amami and sound changes.

Chapter Five offers a sub-grouping of the Modern Amami dialects, with a tree diagram and isoglosses.

Chapter Six contains a comparison of the Old Japanese A/B contrast with PA.

Chapter Seven compares the results obtained for PA from Chapter Six with the work of past researchers, specifically Shibata.

Chapter Eight is a summary of this work, plus suggestions for further work on Proto-Amami.

ACKNOWLEDGEMENTS

I would like first of all to express my gratitude to those wonderful islanders who speak the beautiful Ryukyu dialects who were kind enough to serve as informants for the linguistic surveys upon which this work is based.

I would also like to thank Professor S. Nakasone, Professor M. Wakugami, Professor Y. Uemura, and a young Ryukyuan scholar, S. Karimata of the University of the Ryukyus, all of whom, in the course of my field work surveys, offered me essential advice and help.

My appreciation goes to Mr. Warren-knot of the Sasakawa Foundation for his warm consideration in offering me financial help in both 1986 and 1988.

To Dr. L. Takeuchi of the School of Oriental and African Studies, from whom I have gained new knowledge of Japanese linguistics, go my thanks.

I especially wish to express my thanks to my supervisor, Professor T. Bynon, who taught me the rigours of the Neogrammarian approach to historical linguistics, for her enduring guidance and her spiritual support and care.

A best friend of mine, Ellen Larson, helped me with my English and typed all but a dozen pages of this work. I would like to express my thanks to her for her professional editing and word-processing skills, and above all for her extreme patience and continuous encouragement.

Finally, I would like to thank Yoshimi and Asako Yamamura, my parents-in-law, for their financial and their emotional support; for their care of my children during my study in England, and especially for their love and understanding. My mother, Kimie Urakami, has long awaited the completion of my PhD work, and for this I wish to thank her. I wish to particularly thank, for her patience and love, my wife, Yoko, who has brought up our children in Kyoto.

To the people I love

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KEY TO ABBREVIATIONS AND SYMBOLS

Abbreviations:		Symbols:	
Sib	Siba dialect	/ /	phonemic transcription
Sho	Shodon dialect	[ ]	phonetic transcription
Nas	Nase dialect	'_'	irrecoverable segment
Ong	Ongachi dialect	/	in the environment of
Yen	Yen dialect	>	has become
Yoa	Yoan dialect	<	has come from
San	Sani dialect	≠	morpheme boundary
		~	alternates with
Kyu	Kyushu dialect	<L>	loan
Kag	Kagoshima dialect	<L?>	possible loan
MdAm	Modern Amami	C	any consonant
MdJ	Modern Japanese	V	any vowel
MC	Middle Chinese	id	identical gloss
OJ	Old Japanese	IRC	irrecoverable
Ok	Okinawa dialect	INV	invalid
PA	Proto-Amami	(SF)	stem final
PJR	Proto-Japanese Ryukyuan		
PR	Proto-Ryukyuan		
Pre-OJ	Pre-Old-Japanese		
Proto-SS	Proto-Sib-Sho		
Proto-ONYY	Proto-Ong-Nas-Yen-Yoa		
SJ	Standard Japanese		
Ymt	Yamatohama dialect		

Chapter One

INTRODUCTION

1.1 The aim of this study

In the past few decades some of the most controversial problems in the phonology of Old Japanese have centred around a number of putative phonological contrasts represented in the orthography of the extant OJ texts and traditionally known as the 'Kō-rui' and 'Otsu-rui' (lit. 'A-type' and 'B-type') syllables (2.2.1). These A/B-type contrasts are supposed to have been lost in the Post-OJ period.

There are about a dozen important works on this topic already (cf. 2.2.3). However, these works have almost entirely been based upon the reconstructed phonetic values of the Chinese characters used to render the OJ syllables. Even though the results of the phonetic evaluation of OJ through this approach are as a whole supported by those of a morphophonemic analysis of OJ, the arguments remain moot, since the reconstruction of the Chinese values has been done through a quite complex process which partially takes into consideration how the Chinese characters were used to represent the OJ syllables.

The other approach often previously employed to this problem of OJ phonology has been by means of a comparison of OJ and the Ryukyu dialects (cf. 3.1.2), which have been proved to be related to Japanese (cf.3.1.1). In this approach, the Amami dialects of Ryukyu are the most important of all. This is because a direct counterpart of the OJ A/B contrast has been claimed to exist today in some of the Amami dialects (3.2.1).

The present work also aims to tackle the OJ problem by examining the evidence of the Amami dialects. However, unlike the previous works, it will first attempt a reconstruction of the Proto-Amami (PA) phonemes. This is because the writer believes that PA, if reconstructed systematically and rigourously, should provide the most reliable data for a reconsideration of the OJ problem.

As a phonological reconstruction of PA which follows the recognised principles of Indo-European comparative linguistics had never before been attempted, I could find no data comprehensive enough for the purpose. Hence, the need arose of collecting and transcribing my own data.

Therefore I myself planned and carried out a series of fieldwork surveys in the Amami Islands. In the following subsections I will provide the details of those surveys in the Amami Islands.

1.2 Linguistic surveys in the Amami Islands

With a view to finding possible evidence to shed light on the problems of OJ phonology, I undertook three fieldwork surveys in the Amami Islands between October 1985 and January 1988.

In the early days of this study, my concern was not only for the Amami dialects, but also for those of Okinawa. Both groups belong to the Northern Ryukyuan languages (cf. Fig. 302). Therefore my first survey was designed to cover over twenty dialects found in Okinawa, Yoron, Okinoerabu, Tokunoshima, and the Amami Islands.

The second and third surveys, however, were targeted entirely at the Amami dialects, as the writer had by then established that this would best and most economically provide the comparative evidence desired.

1.2.1 Date and duration of surveys

The date and duration of the three surveys are as follows:

First survey	October 1985	to	December 1985
Second survey	March 1986	to	April 1986
Third survey	January 1988		

1.2.2 Selecting the dialects

The writer collected data from eleven Amami dialects. From these eleven dialects, I selected those dialects which would make the phonological reconstruction and examination the most economical and effective for the ultimate purpose of the examination of OJ phonology through the reconstruction of PA.

1.2.2.1 Criteria for selection

The selection was made based on the following priniciples:

1) The dialects should represent the entire geographical area of the Amami Islands.
2) The geographical distance between the selected dialects should be as far as possible.

1.2.2.2 Selected dialects and their locations

In accordance with the principles given above, the following dialects were selected. Abbreviations used henceforth for these dialects are given to the right (note that when we refer to the place name, the abbreviation is not used).

Siba	Sib	Yen	Yen
Shodon	Sho	Yoan	Yoa
Ongachi	Ong	Sani	San
Nase	Nas		

Observe the locations of the seven dialects in the map provided in 5.2.

1.2.2.3 Details of informants

The name, sex and date of birth for each informant is given below, along with the dates during which the data were collected.

Figure 101. Informant information

Dial	Name	Sex	Date/Birth	Date/Collected
San	Kazuro Maeda	M	-	19 Nov 1985
Yoa	Tadashi Higo	M	9/2/1905	17 Nov 1985
	Kei Higo	F	12/12/1906	17 Nov 1985
Yen	Kaneyoshi Nagata	M	18/12/1898	21 Nov 1985
Nas	Yoshinobu Ebara	M	5/10/1905	22,26 Nov 1985
Ong	Gengo Mori	M	16/10/1921	25 Nov 1985
Sho	Minoru Yoshikawa	M	1/10/1916	24 Mar 1986
Sib	Shingi Nakajima	M	1916	25 Mar 1986

The professions of the informants before retirement were as follows.

Shi	Fisherman
Sho	Farmer
Ong	School teacher
Nas	School teacher
Yen	General labourer. This informant stated that he had worked for six years in Kobe Japan as a cab driver.
Yoa	School teacher. This informant was extremely well-educated.
San	Silk weaver. This informant had a passionate hobby, singing and playing traditional music on the shamisen.

1.2.3 Selecting lexical items for the surveys

To set up a questionnaire, words and glosses from the known OJ lexicon were chosen, with the intention of finding the corresponding forms from each of the seven dialects.

The OJ words were carefully selected so that they would, as a whole, contain as many A-type, B-type, and Non-A/B-type syllables as possible, but in the most economical way.

The total number of lexical items which were chosen for research is 261 (cf. Appendix One - master list).

Chapter Two

SOME PROBLEMS IN THE PHONOLOGY OF OLD JAPANESE

2.1 General notes on Old Japanese

2.1.1 Definition of the term 'Old Japanese'

The term 'Old Japanese' here refers to the oldest historical dialect of Japanese preserved in written records. It was the dialect spoken in Yamato province (the present Kinki district) from about the fifth century until the middle of the eighth. Old Japanese (OJ hereafter) is attested in a variety of texts, e.g. the 'Kojiki' (720 AD), the uta ('song, poem') of the 'Nihon-shoki' ('Nihongi') (720), the 'Fudoki' (730), the 'Man'yoshu' (750), etc.

2.1.2 The Old Japanese Writing System

2.1.2.1 Kanbun

Kanbun is basically the use of Chinese characters with the intention of having them read as Japanese words. This is accomplished by assigning to each character a reading; either a native gloss (kun-yomi) or a Sino-

Japanese loan word pronunciation (on-yomi). The text is then 'scanned', allowing the assigned reading of characters and the insertion of particles and so forth, so that the result is an approximation of Japanese speech.

2.1.2.2 Man'yōgana

Chinese characters could also be used solely for phonetic purposes. A character might represent a syllable of OJ independent of its meaning in Chinese; e.g. 耶麻等 jamato 'Japan'. Occasionally, one finds two consecutive syllables represented by a single kana, e.g. 加毛 kamo '[sentence final particle for 'amazement']'

It was only after the OJ period that characters used as phonograms were abbreviated and differentiated from idiograms in the kana Japanese writing system. However, kanbun and man'yōgana were both used in OJ texts. A given character may therefore be both a man'yōgana (man'yō + kana; cf. the text title 'Man'yōshu') and an 'ordinary' character employed in kanbun.

2.1.3 The phonemes of OJ

The phonemic analysis of OJ is one of the most controversial fields of OJ phonology, since it necessarily

includes the problem of the well-known orthographic distinction of syllables normally termed as the 'A-type and B-type' syllables (cf. 2.2.1 below), which merged into a single type of syllable in the Post-OJ period.

As the arguments on this problem have remained moot throughout the history of research in this field, I will present an analysis of some of the major works in 2.2.3. below.

2.1.4 The syllables of OJ

One of the most conspicuous features of the surface structure of word forms in OJ is that they are almost always composed of syllables consisting of consonant plus vowel. There are in the spellings no 'long' vowels or 'long' consonants as in modern Japanese: cf. Md J /kata/ 'shoulder' vs. /katta/ 'won'. Consonant clusters and vowel sequences are also lacking, as are the moraic nasals of later Japanese: cf. Md J /sen/ 'line'.

The general pattern is that each OJ word is a string of CV-shaped syllables, with C potentially Ø, but only in morpheme-initial position. For example:

asi 'leg; foot'

asita 'morning'

2.2 Problems in the phonology of OJ: previous works

2.2.1 The A/B distinction

If one compares the OJ spellings with that of Modern Japanese it will be seen that two sets of man'yōgana graphemes were used in OJ where later Japanese has the single syllables: e.g. 於岐 oki$_1$ 'breath' vs. 於紀 oki$_2$ 'getting up'. These sets were observed for OJ syllables: ki, gi, pi, bi, mi; ke, ge, pe, be, me; and ko, go, so, zo, to, do, no, jo, ro. These two sets of man'yōgana graphemes have come to be labelled ko and otsu, i.e. A and B. The A-type syllables are those represented as CV$_1$ and the B-type as CV$_2$ in Table 101 below: e.g. ki$_1$ /ki$_2$, ke$_1$/ke$_2$, ko$_1$/ko$_2$. Several man'yōgana graphemes were used to represent one OJ syllable; e.g. OJ ki$_1$ and ki$_2$.

ki$_1$ (A-type ki) 岐 杵 只 吉 企 棄 者 祇 祁
ki$_2$ (B-type ki) 紀 基 機 己 規 奇 既 気 幾

The existence of these A/B pairs was first noticed by Moto'ori Norinaga in the eighteenth century. The first systematic presentation of OJ syllables was done by Hashimoto (1950), where the following syllables are found to be attested in OJ.

Table 201. Inventory of OJ syllables

Øa	ka	ga	sa	za	ta	da	na	pa	ba	ma	ja	ra	wa
Øi	ki$_1$ ki$_2$	gi$_1$ gi$_2$	si	zi	ti	di	ni	pi$_1$ pi$_2$	bi$_1$ bi$_2$	mi$_1$ mi$_2$	-	ri	wi
Øu	ku	gu	su	zu	tu	du	nu	pu	bu	mu	ju	ru	-
Øe	ke$_1$ ke$_2$	ge$_1$ ge$_2$	se	ze	te	de	ne	pe$_1$ pe$_2$	be$_1$ be$_2$	me$_1$ me$_2$	je	re	we
Øo	ko$_1$ ko$_2$	go$_1$ go$_2$	so$_1$ so$_2$	zo$_1$ zo$_2$	to$_1$ to$_2$	do$_1$ do$_2$	no$_1$ no$_2$	po$_1$	bo$_1$	mo (mo$_1$) (mo$_2$)	jo$_1$ jo$_2$	ro$_1$ ro$_2$	wo

2.2.2 Alternation phenomena of OJ vowels

Traditional study has found that some OJ vowels alternate in occurrence. OJ u and OJ o$_1$ constitute such an alternating pair, as do OJ a and o$_2$.

The former alternation is caused by an orthographic confusion stemming from the phonetic closeness of the two vowels. The latter, on the other hand, works to create a slight and subtle semantic difference.

For example:

o$_1$ o		u		a		o$_2$
majo$_1$	.	maju		asasi	.	oso$_2$si
'cocoon'		'id'		'shallow'		'dull, slow'

2.2.3 Phonetic and phonemic analysis of previous writers

2.2.3.1 Hashimoto and Arisaka

2.2.3.1.1 Phonetic assessments based on reconstructed MC values

In the early days of research in this field, two major works were undertaken, Hashimoto (1950) and Arisaka (1957), utilising MC values for reference.

Hashimoto (1950), based on his lectures at the University of Tokyo in 1932, compares the man'yōgana graphemes with reconstructed MC and Sino-Korean values for the same characters and comes up with the following phonetic values for the A/B pairs:

i_1 *[i]	e_1 *[e]	o_1 *[o]
i_2 *[i̯i]	e_2 *[i̯e]	o_2 *[ö]

Arisaka (1957), following Hashimoto, makes the same comparison using the reconstructed Chinese of the Inkyo (or Rhyming) table. His result is:

i_1 *[i]	e_1 *[e]	o_1 *[o]
i_2 *[i̯i]	e_2 *[əi] or *[ə̯e]	o_2 *[ö]

2.2.3.1.2 Non A/B cases

Although his assessment is well known for its

methodological depth and accuracy, Arisaka is uncertain of the phonetic value of OJ non A/B i, e, and o (1957: 446f.).

2.2.3.1.3 Difficulties in the method of Hashimoto and Arisaka

The phonetic assessments of Hashimoto and Arisaka have always been fundamental to any research on this topic. Many linguists, under the assumption that these results are sound, have attempted the phonemic analysis of OJ syllables based on their work. However, as Arisaka himself says, there is a serious problem in his assessment process. The problem is that a variety of MC graphemes are found for single OJ syllables. Now this variety may be attributed to various sources (e.g. different dialects, or different historical stages, of MC) but it may also relate to the fact that the selection of graphemes and their assignment to OJ syllables was perhaps often, if not always, made by Japanese speakers whose mother tongue may have had fewer oppositions than MC had at the time (e.g. MC had six 'velars': /k/; /kʰ/; /gʰ/; /n/; /X/; /ɣ/, while OJ had only two: /k/ and /g/). For example, it seems that the graphemes 歌 訶 軻 and 加 were all used indiscriminately to represent OJ ka. Their reconstructed MC values are *[kɑ], *[hɑ], *[kʰɑ] and *[kɑ], corresponding to Modern Mandarin [gɤ], [Xɤ], [Xɤ], and [ʤiɑ] respectively. The MC rhyme-final (the Chinese syllable minus the initial consonant), 脩 *-iei, for example, is

often classified as both OJ e_1 and e_2 (Miller, 1971: 63 ff.), especially in the 'Nihon-shoki' text (Wenck II, 1954).

Because of this apparently incoherent and unsystematic use of man'yōgana graphemes in OJ texts, those who try to reconstruct OJ phonetic values necessarily face the difficulties that Arisaka met with, no matter how good the reconstructed MC data may be. Even in such a great work as Arisaka (1955), the ultimate classification of OJ vowels is often speculative, based on, for instance, the theory of the diphthongal origins (2.2.4) of some OJ vowels (or vocalic elements); e.g. OJ i_2 is thought to come from Pre-OJ *-ui- and to have become Post-OJ /i/ *[i], Therefore OJ i is postulated to have had a value such as *[ɨ̞i]. Arisaka remains uncertain about the phonetics of OJ non A/B i, e and o when his speculations fail to provide a convincing explanation.

2.2.3.2 Ōno and Miller

Ōno (1974) on the basis of reconstructed MC values, proposes to set up an eight-vowel system for OJ as follows:

i	ï	u	i_1, i = /i/	i_2 = /ï/
e	ë	ö o	e_1, e = /e/	e_2 = /ë/
	a		o_1, o = /o/	o_2 = /ö/

Miller (1971) gives the same view (cf. Matsumoto 1984). However, Hattori (1976) and Matsumoto 1984 disagree with this vowel system in terms of linguistic plausibility.

2.2.3.3 Lange and Unger

Lange's work is also based on the MC values reconstructed by Karlgren (1954, 1957). Lange (1973) comes up with a reconstruction of only five vowels; viz. a, i, u, e, and o, ascribing the A/B distinction to the existence of a palatal glide between C and V for i and e, and a labial glide for o. Therefore the correlations between the reconstructed syllables and the A/B distinctions are as follows:

i	A-type	kji	gji	pji	bji	mji		
	B-type	ki	gi	pi	bi	mi		
e	A-type	ke	ge	pje	bje	mje		
	B-type	kje	gje	pe	be	me		
o	A-type	kwo	gwo	swo	zo	to	do	nwo
	B-type	ko	go	so				no
o (cont.)	A-type	po	bo	mo	jo	lo	wo	

From the traditional viewpoint, where /e/ and /je/ are considered as an A/B pair, Lange's conclusion in

setting up the above syllables is somewhat questionable, in the sense that, for instance, Cje is sometimes A-type and at other times B-type.

Unger (1975), revising Lange's reconstruction, reaches a conclusion that looks more consistent than Lange's. Unlike Lange's reconstruction, Unger's is completely consistent with the A/B distinction. Therefore, we can present Unger's reconstruction by allowing C to represent all consonants.

i	A-type	Ci
	B-type	Cwi
e	A-type	Cye
	B-type	Ce
o	A-type	Cwo
	B-type	Co

2.2.3.4 Mori

Using his illuminating theory of α- and β-group graphemes (cf.2.2.3.6 below) as a foundation, Mori (1981) proposes the following reconstruction:

i	ɨ	u	i_1 = /i/	i_2 = /ɨ/
e	ə	o	e_1 = /e/	e_2 = /əi/
	a		o_1 = /o/	o_2 = /ə/

Matsumoto (1984) claims a discrepancy, however, in Mori's reconstruction in terms of his historical view of OJ phonology. Matsumoto says that OJ i_2 is traditionally ascribed to $*o_2i$ (cf. 6.2.1), which was, according to Mori's reconstruction, once /əi/. Thus it seemed to Matsumoto unaccountable that e (which was also /əi/ in Mori) and i_2, being virtually the same, did not merge.

Matsumoto's claim may sound plausible. However, I believe that it only seems plausible, and does not hold up under closer scrutiny. Consider that $*o_2$ i was, as discussed in 6.2.1, the Pre-OJ source for OJ i_2, and that the Pre-OJ source for OJ e_2 was *ai. At the time of OJ, according to Mori, i_2 was /ɪ/ and e_2 was /əi/.

2.2.3.5 Hattori

Given the data of Hashimoto and Arisaka, Hattori (1983), somewhat modifying his old formulation of 1976, proposes the following new interpretation:

Ci_1 */Ci/	e_1 */Cje/	o_1 */Co/
Ci_2 */C°i/	e_2 */Ce/	o_2 */Cɤ/

According to Hattori */°/ in /C°i/ represents a 'non-palatal' glide (lit. translation) */i̯/, which, I believe, is the phonemic representation of the [ɪ̯] and [i̯] found for i_2 in Hashimoto (1950) and Arisaka (1957) (cf. 2.2.3.1 above).

2.2.3.6 Mori's theory of 'α- and β-group' graphemes

The recent work of Mori (1981) simplifies the problem discussed above (2.2.3.4) to a considerable extent. Mori studies only those man'yōgana graphemes used in the uta 'song, poem' of Vol. 14-19 and 24-27 of the 'Nihon-shoki'. He calls the graphemes found in these volumes the 'α-group', the rest being the 'β-group'. Mori's claim is that the graphemes in the 'α-group' yield a much more consistent phonetic representation of OJ on the grounds that while the 'β-group' involves rather varied rhyme-finals, the 'α-group' has considerably less varied ones. Mori infers that this 'α-β-phenomenon' comes from the two different ways in which the graphemes were selected; viz. that the graphemes of the 'α-group' were those assigned by the then Chinese who belonged to a single dialectal community, and that those of the 'β- group' were, on the contrary, selected by the native speakers of OJ.

Let us see below (Table 202) how clearly the 'α- and β-group' are distinguished in the case of, for example, the MC */k/ *[k] and */h/ *[h] variation vs. the putative single OJ */k/. The figures in the list of Table 202 show the total frequency of the cases where the MC values *[k] and *[h] are used to represent OJ ka, ko_1, and ko_2 in each volume of the 'Nihon-shoki'.

Table 202 Assigned MC values for OJ

	Group																					
	β											α					β		α			
	Volume Number																					
	1	2	3	5	6	7	9	10	11	12	13	14	15	16	17	19	22	23	24	25	26	27
											*[k]											
ka		10	12	8		7	10	11	29	1	5	20	3	19	10	2	6	1	7	6	14	3
ko		1	4	2		1	2	3	7		3	7		4	2	2	3		2	2	4	6
ko		3	4					1			4	8	1	3	8				8	1		2
											*[h]											
ka		1					1	3			2						7					
ko				1					1								1					
ko			2	2		5	5	4	23		5							2				

The list clearly shows a consistent patterning of the figures by the 'α-group'. This patterning is seen not only here but also in the case of MC aspirated/non-aspirated consonants vs. a putatively single non-aspirated consonant in OJ (Mori, 1981: 32 ff.) and also in the case of MC varied rhyme-finals vs. OJ (missing) correlation (33 ff.).

This consistency in the twofold patterning of the figures in the different cases such as those just cited above cannot be attributed to a casual coincidence. Therefore, we believe that Mori's theory of the 'α-group' and 'β-group' is justified, and that his results may be regarded as the most adequate analyses of all.

2.2.4 Status of Non-A/B o, i, and e

As we have seen, much work has been concentrated on the OJ A/B contrast. Surprisingly, however, little has been said about Non-A/B syllables (Co, Ci, and Ce).

In this section, therefore, I would like to examine the A/B status of Non-A/B o, i, and e. I will accomplish this by checking the rhyme-finals of the Non-A/B syllables, trusting the reliability of the 'α-group' graphemes claimed by Mori (1981). MC values in the following tables are from Pulleyblank (1984).

2.2.4.1 Non-A/B Co

The rhyme-finals found for the Non-A/B Co syllables are listed in Table 203. The total frequencies of the values for all Co_1 syllables and Co_2 syllables are summed up and attached to the list.

Table 203. MC values found for non-A/B Co

MC / OJ	模 uo	模b dg udg	鍾 uon	侯 əu	模a o wo	魚 io	登 əŋ	哈 ʌi	侯b [lab] əg	侯a u ug ŭg	登合 wəŋ	豪 au
ϕo						36						
po	2						1			16		3
bo							3					
mo	40								29			
wo	44										2	
Co_1	34	4	3	2	4							
Co_2						48	177	10				

The list clearly shows that OJ Øo falls into the Co_2 category. Although Hattori (1983) suspects the possibility of the existence of an A/B distinction for OJ Øo despite the lack of orthographic distinction, our data do not seem to support his claim.

2.2.4.2 Non-A/B Ci

In the same manner as the results for the case of the OJ Non-A/B Co syllables are presented above, the results for the OJ non-A/B Ci syllables are listed here in Table 204.

Table 204. MC values found for non-A/B Ci

MC / OJ	支a ie,i	脂 i	支b rĕ,ɪi	之 rəi, ɪ:	微 rəi	支合 wie
Øi		27		6		
si	21	12	2	69		
zi	1	1				
ti	6	10				
di		2				
ni	57	4		5		
ri		28		7		
wi					6	1
ki_1	72	2				
gi_1			3			
ki_2				10		
gi_2				9		

Unlike the case of Non-A/B Ce below, the results for Non-A/B Ci take on a rather inconsistent look; viz. the different rhyme-finals used for OJ ki_1 and gi_1, and ki_2 and gi_2 are all mixed up - especially in the case of OJ si. Because of this no analysis is attempted at this time to find out to which category the Non-A/B Ci syllables belong.

2.2.4.3 Non-A/B Ce

The results for the Non-A/B Ce syllables are listed in Table 205 below, along with the total frequency Ce_1 and Ce_2 syllables.

Table 205. MC values found for non-A/B Ce

OJ \ MC	脊 ei	祭 iɛi	祭合 iwɛi	咍 ʌi	灰 uʌi
øe				1	
se	11	11			
ze		1			
te	36				
de	11				
ne	4				
je		14			
re	6	17			
we			5		
Ce_1	32	1			
Ce_2				26	24

What we notice from a glance at the above list is that the OJ Non-A/B Ce syllables except Øe and we belong to Ce_1 .

For OJ we, the rhyme-final 祭㊀[iwɛi] is found. This rhyme-final is simply a labialized version of 祭 [iɛi]; the sign '㊀' of '祭㊀' represents 'labial'. The grapheme used for OJ we in the α-group is only 衛 ([Øiwɛi]), which has no initial consonant value. Most probably the [-w-] in 衛 [Øiwɛi] represents the value of the OJ consonant w, and thus the rest ([i-ɛi]) represent the e of OJ we.

We may say, therefore, that OJ we falls into the A-type Ce category.

Incidentally, the man'yōgana graphemes used for we in the β-group and their reconstructed values are:

衛 [Øiwɛi]
惠 [ɣiwei]
廻 [ɣuǎi]
隈 [ʔuǎi]
穢 [ʔiwʌi]

The MC value found for OJ Øe is 口台 [ʌi]. This tells us that OJ Øe belongs to the B-type Ce. However, we ought to be careful here, because the total frequency of 口台 [ʌi] for OJ Øe is 'one' in the α-group.

2.2.5 The theory of diphthongal origins

As we saw earlier in 2.1.4, the canonical pattern of each OJ word is a string of CV-shaped syllables. However, diphthongs do occasionally occur. For example, two vowels occur consecutively at a morpheme boundary; i.e. -CV≠VCV- (ØV can stand in the morpheme-initial position, cf. 2.1.4). When such combinations occur, one of three processes is observed. These three synchronic processes are:

1) Epenthesis of a consonant:

paru	+	s	+	ame_1	>	parusame
'spring'				'rain'		'spring rain'
uma	+	k	+	ori	>	$umako_2ri$
'good, fine'				'weaving'		'fine weave'

(Yamaguchi 1974)

Examples of this process are comparatively rare (Yamaguchi (1974) found only fourteen examples) when compared with the other two processes. Moreover, some of the examples are somewhat problematic since they are frequently analysed by differing methods. For instance, umakori, just cited above, has been analysed as:

a) uma + ki [aux v] + ori (cf. Unger 1975:25f)

b) uma + ku (substantivizing suff) + ori

c) uma + kori (Korean for 'figured cloth') (cf. Jidaietsu Kokugo Daijiten)

When interpreted as a) or b) above, such cases as umako$_2$ri are no longer examples of epenthesis. Rather, they must be treated as cases for the second process:

2) Loss of either first or second vowel

to$_2$	+	ipu	>	to$_2$pu
'[conj. that-]'		'say'		'say that -'
waga	+	ipe$_2$	>	wagape$_2$
'my'		'house'		'my house'
ara	+	iso$_1$	>	ariso$_1$
'deserted'		'beach'		'deserted beach'
kuni	+	uti	>	kunuti
'country'		'inside'		'the inside of the country'

(cf. Yamaguchi 1971)

Unlike the first process, epenthesis, examples of this process are numerous. Following and modifying Kishida, who in his work of 1942 suggested that it is phonological conditioning which decides whether the first vowel or the second vowel will be dropped, Yamaguchi (1977)

sets up a series of phonological rules. I will sum up these rules established by him below. Note that the numbers under each V simply denote the order of the vowels in the given string and have nothing to do with the A/B distinction (For the purposes of the following diagram, --> Ø = becomes zero (is dropped); > = more 'open' than; ≥ = not 'closer' than.)

For the sequence 'CVCV≠VCV'
1 2 3 4

Rule 1 V ---> Ø / V > V
2 3 2

Rule 2 V ---> Ø / though V > V; V ≥ V
3 3 2 4 3

Rule 3 V ---> Ø / V > V
3 2 3

Rule 4 V ---> Ø though V > V; V ≥ V
2 2 3 1 2

Rule 5 V or V ---> Ø / V and V
2 3 2 3

3) Replacement of both vowels by a single, different vocalic element:

Since Hashimoto, in 1932, first suggested the idea of diphthongal origins for OJ e_1, e_2, and i_1, it has been, and is now, one of the widely accepted theories of Japanese historical linguistics. Yamaguchi (1971: 11f, following Arisaka 1957, and Kawabata 1968) sums up these changes and adds to them a new entry exemplifying a

diphthongal origin for OJ o_1. The following types of monophthongization are enumerated as follows:

a) *Cai > Ce_2

*/naga + iki_1/ 'long + breath' > /$nage_2$ ki_1/ 'sigh'

b) *Ci_1a and *Cia > Ce_1

*/$saki_1$ + ari/ 'bloom + exist' > /sake/ri/ 'be blooming'

c) *Co_2i > Ce_2

*/to_2 no_2 + iri/ 'palace + enter' > /$tone_2$ri/ 'servant to the imperial family'

d) *Ci_1o and *Cio_2 > Ce_1

*/pi_1 + oki_1/ 'day, sun + put' > /pe_1 ki_1/ 'family name'

e) *Co_2i > Ci_2

*/opo + isi/ 'big + rock' > /opi_2si/ 'place name'

f) *Cui > Ci_2

*/waku + $iratuko_1$/ 'young + (term of veneration, male) > /$waki_2$ratuko$_1$/ '(appellation)'

g) *Cuo_2 > Co_1

*/situ + ori/ '(ancient type of native weaving) + weave > /$sito_1$ri/ 'id'

2.2.6 The internal reconstruction of Pre-OJ vowel systems

The set of rules discussed in the previous section has tempted linguists to a reconstruction of a Pre-OJ four-vowel system. Ōno (1953, 1978), for example, claims a system having *a, *i, *u, and *o_2 for Pre-OJ.

Indeed, the statistics in Ōno (1978; 537f) on the frequency of the eight OJ syllables seem to support this reconstruction. He also establishes the fact that Ci_2, Ce_1, and Ce_2 often appear in positions in which such a sequence is possible (i.e. at morpheme boundary). Ōno also attempts to show complementarity for Co_1 and Co_2, although he is not entirely successful.

However, a four-vowel system for Pre-OJ cannot be fully accepted until all eight vowels in OJ are accounted for; specifically, until the possibility that Pre-OJ vowels existed in the same shape as the four new OJ vowels has been eliminated. It is Matsumoto (1975) who first tried to eliminate that possibility.

Matsumoto, in fact, examines individual cases closely and comes to the conclusion that 'e' (his general transcription for e_1, e_2, and e), i_2, and o_1 were in fact new entries in the OJ vowel inventory. He is therefore led to the reconstruction of a four-vowel system for Pre-OJ.

I believe that Matsumoto succeeds in providing solid evidence for the non-existence of 'e' and i_2 in Pre-OJ.

However, as far as o_1, o_2, and o are concerned, he confines his data to cases where he finds these vowels

alternating with a to produce semantically related pairs (e.g. OJ kura 'dark' ~ kuro$_1$ 'black'). Despite this he concludes that there was even a stage where no vowels such as *o were present. I believe this to be an extreme overgeneralization.

A claim made by both Ōno (1953, 1978) and Matusmoto (1975) is that o$_1$ and o$_2$ are found to be in complementary distribution in OJ. This may not be true (as commented by Hattori (1976), since we find some minimal pairs with o$_1$ and o$_2$. However, it is of no doubt that o$_1$ and o$_2$ often tend to appear in different environments (cf. Matsumoto 1975; 141ff), and this fact is certainly in favour of the claim that there was only one *o in Pre-OJ. In this respect, we still have to consider that OJ o came (if not always) from Pre-OJ diphthongal source(s) and perhaps from *o as well.

(19) provides good evidence for *o$_2$ > o$_1$. He reports the attestation of this sound change in OJ texts such as the Chikuzenkoseki, Onokoseki, and the Shindaiki of the Nihonshoki.

Observe the following from (19):

kuso$_2$ [personal name]	>	kuso$_1$
AD 702		AD 720
(Chikuzenkoseki)		(Shindaiki)

jaso$_2$ [personal name]	>	jaso$_1$
AD 702		AD 720
(Onokoseki)		(Shindaiki)

2.3. Summary

2.3.1. Phonetic assessment of the A/B distinction

2.3.1.1. The α-group graphemes and Pulleyblank

By way of conclusion to this chapter, I would like to return to the phonetic assessment of the OJ A/B distinction in the light of Mori (1981) and Pulleyblank (1984).

We have found that the α-group graphemes provide us with a fairly accurate base for a phonetic investigation of the OJ syllables, and it would seem worth-while checking there the recent work of Pulleyblank in which he attempts re-examination and reanalysis of the work of Karlgren.

In Pulleyblank, the values of two successive historical stages of Chinese are considered; i.e. 'Early Middle Chinese (EMC)' and 'Late Middle Chinese (LMC)'.

Therefore, I will, if available, represent the reconstructed values for both stages, in the examination attempted in the following subsections.

Based on the two works mentioned above, let us first observe the correlation of the relevant OJ values and the reconstructed MC values. To help simplify the argument, I do not take into consideration the rhymes with frequencies of less than 10 found in Table 204 (2.2.4.1).

OJ.V	rhyme	EMC	LMC
o_1, mo, wo	模	ɔ	uăˇ
o_1, mo, po	候	ow	əw
o_2, øo	魚	ɨăˇ	iăˇ, əăˇ
o_2	登	əŋ	əaŋ
o_2	咍	ɔj	aj

OJ.V	rhyme	EMC	LMC
i_1 (ki_1, gi_1), i	支	iăˇ, jia	i, ji, ṛ, ẓ
i	脂	i	i, ji, ṛ, ẓ
i_2 (ki_2, gi_2)	之	ɨ	i, r, z
cf. wi	微	ɨj	i

OJ.V		rhyme	EMC	LMC
e_1, Ce		齊	ɛj	iai, jiai
Ce		祭	iai, jiai	yaj, jyai
e_2, øe		咍	əj	aj
		灰	wəj	uaj
cf.	we	祭㊟	wiaj, jwiai	yaj, iyai
	je	祭	iai, jiai	yaj, jyaj

As one can observe, the MC values found for the relevant OJ values differ by the type of the rhyme and

historical stage of MC.

Despite this, it is, I think, still possible to draw out from the above presented MC values certain clearcut distinctive elements differentiating the A- and B-type values.

I would like to represent these in the following manner.

Distinctive feature	o_1, Co	o_2, $\emptyset$o
Rounding, or labial	+	-
Back	+	-

Dist. feat.	i_1, i(zi,ti,di, si,ni ri)	i_2, i(si, ni, ri, wi)
Front	+	-
Central	-	+

Dist. feat.		e_1, Ce	e_2, $\emptyset$e
EMC	Front	+	-
	Central	-	+
LMC	-j-	+	-

Considering these features, I would summerize our examination as follows:

First, OJ o_1 (and Co) was either *[o] or *[wo], against o_2 (and øo) *[ə].

Second, since what we find for the i_1/i_2 contrast is simply [+ front] and [+ central] respectively, I would first assume that i_1 was *[i], and i_2 *[ɨ].

As for non-A/B i , we observe that OJ si, ni, and ri belong unpredictably to both i_1 and i_2, whereas zi, ti, di to i_1, and wi perhaps only to i_2.

Finally, OJ e_1 and e_2 were distinguished by the [+ front] and [+ central] features respectively in terms of EMC, but by *j- of LMC. Therfore, I would assume *[e] for e_1 (and Ce), and *[ë] for e_2 (and øe), or that the former had *[je] and the latter *[e]. I think that posit ing *[je]/*[e] should be more appropriate, when we see OJ Ce_1 having been assigned MC C plus 祭, the rhyme used for OJ je.

To sum up, I present the result of the above analysis as below. Note that even by using Mori's α-group graphemes and Pulleyblank's reconstructions, our examination through the reconstructed MC values has resulted in some alternative values as below .

o_1, (C)o = *[o] or *[wo]

o_2, (ø)o = *[ə]

i_1, i(si,ni,ri,zi,ti,di) = *[i] or *[i]

i_2, i(si,ni,ri,wi) = *[ɨ] or *[wi]

e_1, (C)e	=	*[e]	or	*[je]
e_2, (ø)e	=	*[ë]		*[e]

2.3.1.2. Phonotactic approach

I would like to suggest that there is another way to tackle this controversial problem of the phonology of OJ.

As we have observed, the OJ A/B distinctinction is found in the case of certain consonants;eg. p, b, m, k, and g for i_1/i_2 and e_1/e_2, and these consonants share the feature [+ grave], whereas the other OJ consonants have [+ coronal] in common.

The o_1/o_2 contrast is not found with labial consonants, and neither in the case of øo.

However, I have not found any clue pointing to the nature of the relationship of these features of the consonants and the A/B distinction except for o_1/o_2 where the result of our assessment attempted in section 2.3.1.1 above and the [lab.] feature are in favor of each other.

Chapter Three

RYUKYU: THE AMAMI DIALECTS

3.1 The Ryukyu dialects

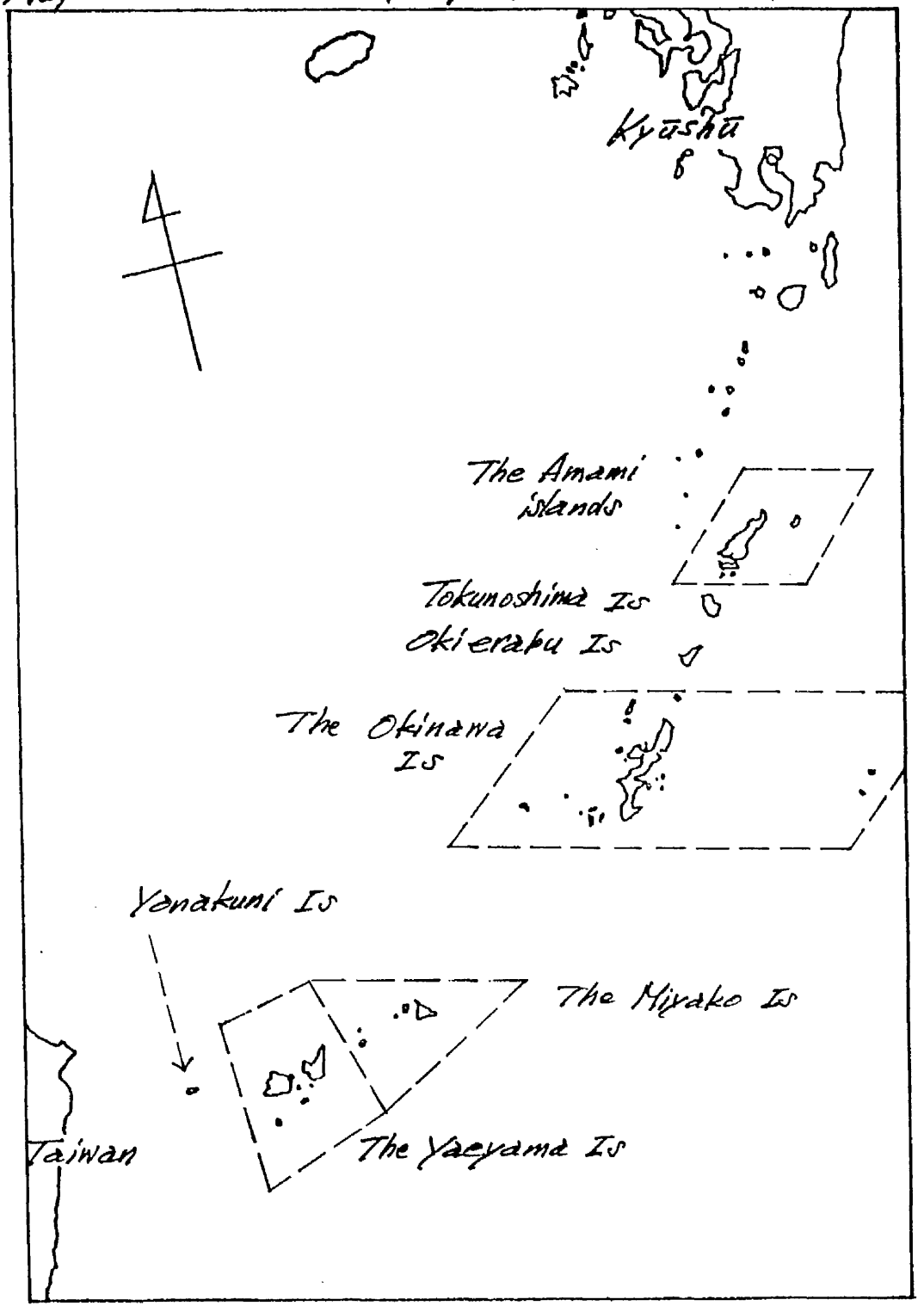
'Ryukyuan' or the 'Ryukyu dialects' is a general name given to the dialects spoken in the Ryukyu Islands, a chain of more than 70 islands extending southwest from Kyushu Japan to Taiwan in an arc 1,200 km long (see Map 1 below).

'Ryukyu' is the Japanese rendering of 'Liuqiu', an ancient Chinese name first used in China to mean Taiwan (Formosa), but used during the Ming dynasty (1368-1644) to refer to the islands of the present day Okinawa prefecture.

The Ryukyu dialects exhibit considerable variation; the dialects of Amami Oshima in the north being unintelligible to the people of Okinawa, as are the dialects of the Sakishima islands (the Miyako and Yaeyama islands) to the south. Even within Sakishima the dialects of Miyako are unintelligible to the people of Yaeyama, and in Okinawa the dialects of the northern part of the island are hard for the people in the south to understand.

Although the Ryukyu dialects are historically related to Japanese, none of them are intelligible to speakers of standard Japanese or any other dialects spoken

Map 1 The islands of Ryūkyū

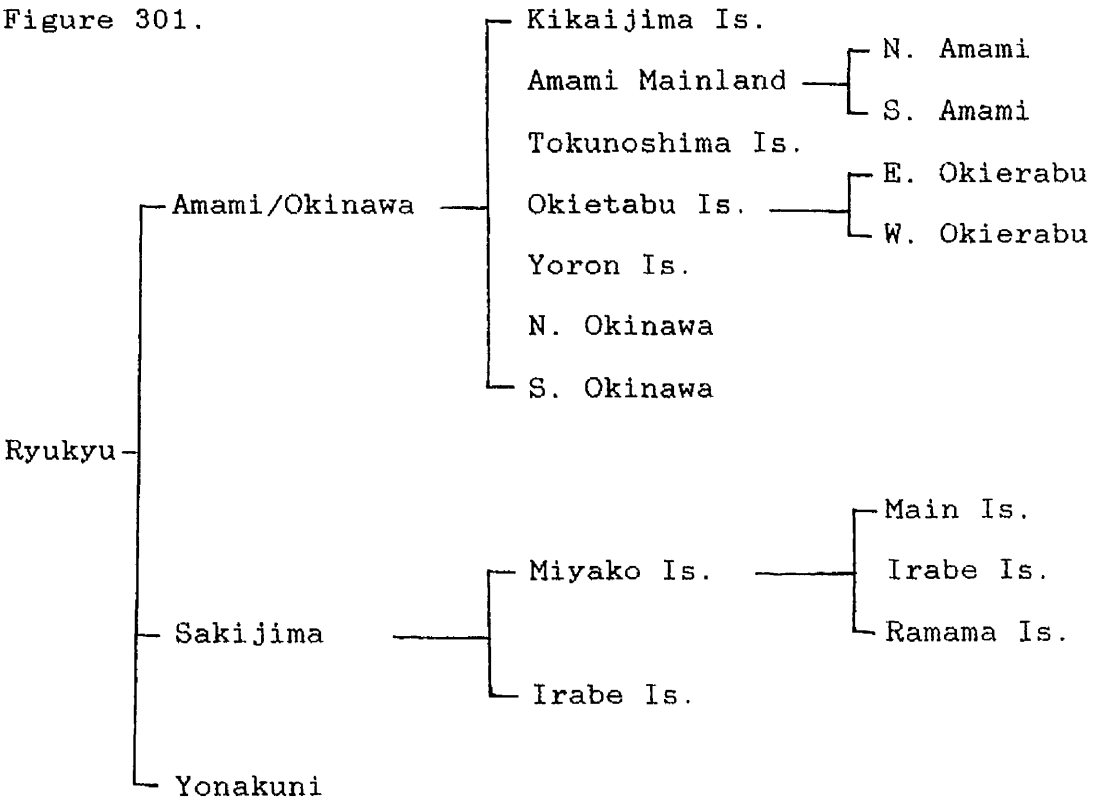


in the main islands of Japan.

More than 100 Ryukyu dialects have been listed. Systematic examination of these dialects to define their relationship to one another, however, is somewhat sketchy.

Uemura (1963) provides us with an analysis which shows the 'major divisions', as he calls them, of the Ryukyu dialects. However, his diagram (Figure 301) does no

Figure 301.



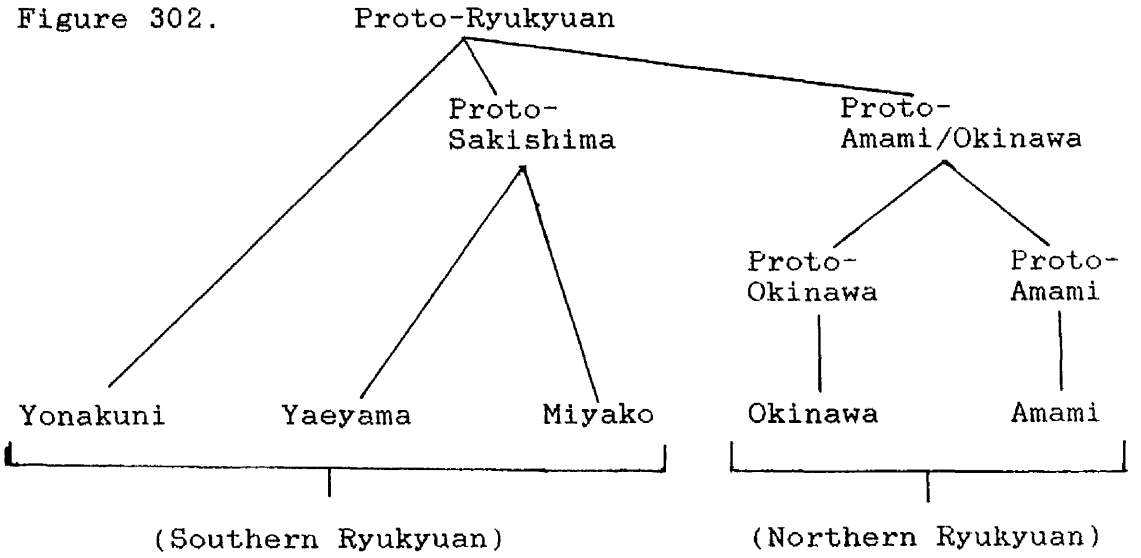
(Y. Uemura 1963)

more than to note differences between dialects which he has observed, and is more geographical than anything else. Uemura does not refer to shared sound changes in his classification, but rather studies the relationship of

certain vowels to one another and to Japanese. Observe that his subdivision of the Amami/Okinawa dialects is merely by island, and then by north and south, or east and west. He is also influenced by both cultural and topographical divisions. Since we find little here to help us understand the relationship of the modern Ryukyu dialects with their past historical stages, we will merely take Uemura's classifications as a starting point.

Nakamoto (1976) collected invaluable data from throughout the Ryukyu Islands. His goal was to detail the vowel systems of the various Modern Ryukyu dialects, which he did systematically and accurately. We can draw upon his data to posit the diachronic anaylysis of the Ryukyu dialects in Figure 302. We suggest a division between Northern and Southern Ryukuan based on Nakamoto's data.

Figure 302.



(Based on Nakamoto's diachronic studies of 1976)

3.1.1 Ryukyuan kinship with Japanese

The kinship between the Ryukyu dialects and Japanese was first claimed by Basil Hall Chamberlain in his work 'Essay in aid of the grammar and dictionary of the Luchuan Languages' (1895). Clearcut sound correspondences between the Ryukyuan dialects and Japanese are observed.

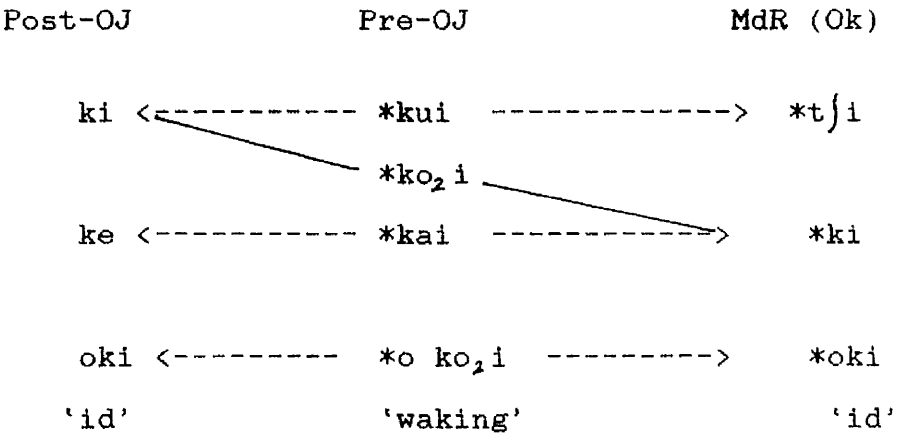
Japanese and the Okinawa dialect, for example, show the following vocalic correspondences:

Modern Japanese	Okinawa
i,e	i
a	a
o,u	u

The Modern Japanese i/e and u/o contrasts are observed in parallel in the Ryukyu dialects in various ways. For example, Modern Japanese ki :: Okinawa tʃi, while MdJ ke :: Ok ki. MdJ ku/ko also has a matching distinction in some other Ryukyu dialects, especially in the Northern Ryukyu dialects. For example: MdJ ku :: Yamatohaman (Ymt) ku, while MdJ ko :: Ymt xu.

That the separation of Proto-Ryukyuan from Proto-Japanese-Ryukyuan is dated as far back as the Pre-OJ period was first argued by Hattori himself (1959). The evidence provided by Hattori shows that Pre-OJ *o_2i (cf. 7.2.1) has a different history in later Japanese and

Ryukyuan. Observe this in the following development:



3.1.2 Previous works on the Ryukyu dialects

There have been four important works on the Ryukyu dialects with regards to the OJ A/B distinctions or their older sources.

The most important is Hattori (1959), in which a glottochronological study is undertaken. In this work, Hattori also claims that he finds in the Nase dialect (one of the Amami dialects, spoken in the capital town of the main land of the Amami islands), a vocalic distinction corresponding to the OJ Co_1/Co_2 distinction.

In a similar manner, the distinction has been claimed in the Yamotohama dialect (another Amami dialect) by Shibata (1984), and also in Shiba (also of the Amami dialects) by Shibata and Mitsuishi (1979). These claims

will be discussed in detail in Chapters Six and Seven.

Other works are Sakiyama (1969) who, after examining the Miyako dialects in detail, concludes that there is no evidence there for the expected distinction. Minami (1960) studied the relationship between the syllables Fu and pu in the Ishigaki dialects (of the Yaeyama dialects) and the OJ Co_1/Co_2 contrast, but could find no evidence of the distinction.

3.1.3 General survey on historical phonology

Putting aside for the moment the controversial claims for the Ryukyuan corresponding forms for the OJ Co_1/Co_2 distinction, we now look at the rather general surveys on the historical aspects of Ryukyuan phonology.

When Chamberlain (1895) observed that there were only three vowels in the Shuri dialect (one of the Okinawan dialects, spoken in the former capital of Okinawa during the Shuri dynasty), corresponding to OJ i, e, a, o and u, he seemed to be convinced that the vowel system of the Shuri dialect reflected a system older than that of Old Japanese.

However, this view of Chamberlain's was later claimed by Ifa (1974) to be incorrect. Ifa suggests that the three vowel system is a product of later sound changes specific to the Ryukyuan dialects, in which the mid-vowels e and o were raised to the closed positions i and u

respectively. In fact, the gradual implementation of these changes is recorded in the Old Ryukyuan text of the Omoro Saushi.

As we have seen in 3.1.1, the distinction of the earlier five vowels is still in evidence in many of the Ryukyu dialects.

The accepted view is that Proto-Ryukyuan had *a, *e, *i, *o, and *u. However, the choice of *e to represent the fifth vowel seems to call for further study.

Given the reconstruction of five vowels for Proto-Ryukyuan, and the evidence for the sound changes *e > i and *o > u, (both widespread in the dialects) and also taking into account the modern Ryukyuan outcome seen above we can draw an historical development as follows:

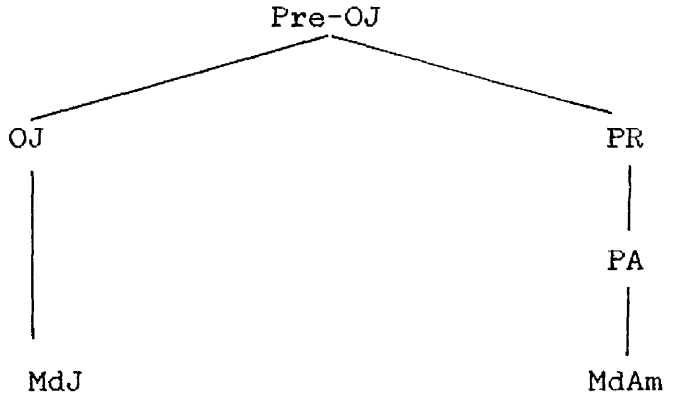
MdJ		PR		MdR	
Ci	::	*Ci	>	Ci	
Ce	::	*Ce	>	Ci	(e > i)
Ca	::	*Ca	>	Ca	
Co	::	*Co	>	Cu	(o > u)
Cu	::	*Cu	>	Cu	

Among the changes mentioned above, PR *Ci > MdR Cyi (palatalization of the initial consonant) and PR *Cu > MdR C^{7}u (glottalization, laryngealization, or deaspiration of the initial consonant) have been interpreted to be the result of push chains triggered off by the widespread

changes in which, as we have seen above, the mid vowels e and o, became i and u respectively.

From recorded Old Ryukyuan we know that these widespread changes were implemented between the 12th and 17th centuries.

Figure 303



3.2 The Amami dialects

The Amami Islands (where we find the Amami dialects) are the northernmost group of the islands of the Ryukyu chain. Amami Island itself (and its close neighbouring island to the immediate south Kakeroma) is the northernmost of the group. Amami is divided geopolitically as follows: Kasari town, Tatsugō town, Nase town, Setouchi town, Yamatoson village, Sumiyoson village, and Ukenson village.

3.2.1 Past research on the Amami dialects

The Amami dialects have attracted the attention of many Japanese and Ryukuan historical linguists. This is because of the potential for contributing to one of the most interesting and controversial problems of OJ phonology.

Attempts to find out possible MdAm correspondences to the OJ A/B syllable contrast have been made by several leading scholars.

Hattori (1969) studied Nase for evidence of the A/B distinction, and found that Nas o/u :: OJ o_1/o_2.

Shibata and Mitsuishi (1979) studied Shiba and found evidence for Shi i/ï, i/ë, and o/u :: OJ i_1/i_2, e_1/e_2, and o_1/o_2 respectively.

Shibata (1984) then followed up with an in depth study of Yamatohama, and found strong evidence for Ymt o/u :: OJ o_1/o_2. It is Shibata's opinion that the Amami dialects have the clearest evidence of all the MdR dialects of the OJ A/B distinction, and should be the focus of further investigation in the field.

As is observed above, most studies have been done involving single Amami dialects.

However, one always has to be aware that when only one particular Amami dialect, rather than its proto-language, is being taken into account, the comparison could involve the consequent sounds of later phonological

innovations of that particular dialect. This sort of comparison is thus vulnerable to amendment and contradiction by a more rigourous and broadly based exploration.

For example, Shibata (1984), as we will examine in depth in Chapter Seven, claimed the existence of a phonemic opposition in Yamatoson (Yamatoson constitutes a dialectal group to which our Ong belongs) equivalent to the OJ o_1/o_2 contrast. Yet he fails to exclude some cases which seem to substantiate the correspondence Am o :: OJ o_1 . This apparently supportive evidence is in fact caused by a later sound change in Yamatoson, which is found in parallel in Ong:

PA *u > o / (C)_Ca

The only way to avoid this sort of mistake is to use the oldest possible records of the relevant languages, or to reconstruct, if possible, a proto-language. It is by doing this - and indeed, only by doing this - that it is possible to identify and exclude apparently supportive evidence and possible counterevidence of this kind.

However, in the history of the study of the Ryukyuan dialects, no reconstructive work seems to have been attempted in a systematic way which could provide us not only with the phonemic inventories of proto-languages, but with lexical lists of reconstructed proto-words.

Certainly, arguments on the earlier phonemic system of the Ryukyu dialects have been attempted. For instance, B.H. Chamberlain, who had claimed for the first time the kinship between the Ryukyu dialects and Japanese, suggested that the vowel system (FN.1) consisting of three vowels i, a, and u reflected that of a Japanese older than OJ (cf. Pre-OJ has (*u, *i, *a.)

Ifa (1974) found an aspirated/non-aspirated contrast in the Okinawa dialects and recognized it as reflecting the MdJ i/e and u/o contrast. He claimed a vowel system consisting of five vowels, *a, *e, *i, *o, and *u for what he called Proto-Ryukyuan (hereafter PR).

Up until the time of Nakamoto (1976), studies on this subject had never been (according to him) more than these rather speculative attempts at reconstruction.

Yet, even though Nakamoto presents a somewhat more empirical argument on how the Proto-Ryukyuan vowels developed to their modern shape and system, his attempts start by employing the five vowels set up in Ifa 1974.

When presented with correspondences such as those which immediately follow, it is first necessary to pose the question 'which dialect, if any, should we designate as representing the proto-segments?'

Footnote 1. It was the Shuri (the contemporary capital of Okinawa) dialect that Chamberlain used in his research (cf. 3.1.1).

Okinawan		MdJ
ci	::	ki
ki	::	ke
ka	::	ka
ku	::	ko
k$^{?}$u	::	ku

It is inaccurate to arbitrarily decide that the proto-syllables from these correspondences are *ki, *ke, *ka, *ko, and *ku. Yet is is a fact that this method of reconstruction has, for many decades, never been seriously challenged.

Our reconstruction of PA, however, attempts to avoid this sort of speculation by employing a methodology which is both rigourously systematic and not dependant on preconception, and hence as unbiased as possible.

All other works on the Ryukyu dialects are synchronic discriptions or philological studies (such as those based on the Ryukyu languages of the 14th to 17th c. in the 'Omoro Saushi').

3.3 Synchronic description of Amami dialects

Our seven dialects (Shi and Sho on Kakeroma Island, part of Setouchi Town, Ong in Yamatoson Village Nas located in Nase Town, Yen in Tatsugō Town, and Yoa and

San in Kasari Town), have similar phoneme inventories. Our limited data agrees with the phonemes set up by Hirayama (1966) in 'Studies on the dialects of Ryukyu' which he based upon extensive evidence from the Amami dialects. He included three of our seven dialects in his study: San, Nas, and Ong. We will therefore refer to Hirayama's work for our synchronic description of our dialects.

3.3.1 Phonemes of the Amami dialects

Hirayama enumerates the phonemes of fourteen Amami dialects (33f), and the number and type of phoneme is the same for each dialect, with the exceptions that San has /ʾ/ and /ᵑ/, and Yoro has /ᵑ/, which none of the other dialects he studied have. We present his results in Figure 304 below.

Note that Figure 304 is a modified version of Hirayama's list from 33f. However, the number and type of distinctive features are, with two exceptions (see Footnote 2 below) exclusively from Hirayama.

Figure 304. Consonants

	ʔ	h	ɸ	ɦ	k	ɣ	g	t	ɾ	d	c	ɕ	s	z	r	n	p	ɲ	b	m	j	w	Q	N	F
glottal	+	+	+	+																					
velar					+	+	+																		
alveolar								+	+	+	+	+	+	+	+	+									
palatal																					+				
bilabial																	+	+	+	+		+			+
semi V																					+	+			
moraic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+	+	
plosive	+				+	+	+	+	+	+							+	+	+				+		
fricative		+	+									+	+												+
nasal				+												+				+				+	
affricate											+	+													
tap															+										
voiced		-	+		-	-	+	-	-	+	-	-	-	+			-	-	+						
laryngealized					-	+		-	+								-	+							
sokuon (FN.1)																							+		

Vowels

High	i		ɨ	u	
				U (FN.2)	
Mid		e	ë	o	
Low			a		

Footnote 1. Refer to 4.1.1.1 and 4.1.5.
Footnote 2. I have added /U/ and /F/ (above) to Hirayama's study as my only additions. For an explanation of their inclusion see 4.2.5.

3.3.2 Phonotactic constraints of the Amami dialects

Our synchronic sketch of our seven dialects can be completed by noting the few specific constraints on vowel sequences which they show.

Shi is the only dialect in which we see uCo occurring in addition to oCo and uCu.

Shi and Sho have closed syllables, in which the final consonant is always voiceless. These two dialects also often show long vowels in word-final position. Samuel Martin, in his 1970 article 'Shodon: a dialect of the Northern Ryukyus' recognizes doublets for word-final vowels and considers their use a matter of preference, a conclusion with which we concur. He presents these doublets as 'mura(a)'. In our data we did not specifically check on doublets for word-final long vowels, and so list such doublets as were given by our informants, but note that their arbitrary use was clear during our interviews.

Chapter Four

THE PHONOLOGICAL RECONSTRUCTION OF PROTO-AMAMI

4.1 Phonemicization used for the reconstruction

4.1.1 Approach and problems

In this section, I would like to discuss the traditional approach used to date by Japanese linguists to make a phonological analysis of the Modern Amami dialects.

These traditional conventions of phonemicization, applied systematically for the first time by Hirayama (in his pioneer work which resulted in a massive collection of data which include immense lists, wholely descriptive in nature, of lexical items found in the Ryukyu Islands) reveal certain problems in the setting up of the phonemes. I believe that these difficulties are the result of a rigid adherence to pre-determined abstract principles by pioneer researchers of the Ryukyu dialects such as Hirayama. Observe three examples which concern us closely:

'	absence of glottal element
Q	first element of geminated consonant
N	word-final moraic /n/

In the following subsections we will deal with these three 'phonemes'.

4.1.2 Modification of the traditional notation

That the phonemic inventory of a language be as economical as possible, and consequently possibly rather abstract to a greater or lesser extent, may serve a useful purpose when analysis is required to be rigorously synchronic. However, I believe that this principle must be modified when setting up a phonemic inventory for the purpose of carrying out historical research such as the reconstruction of a proto-language. In this way we will not find ourselves too far distant from the phonetic reality of the languages.

Based upon this view, I would like to attempt in this section to provide some modification to the traditional inventories of the Amami dialects for the purpose of our historical reconstruction.

4.1.3 Eliminating the notation of /ʔ/ and /'/

We observe in previous phonemicizations the use of some phonemes which I must simply regard as unnecessary. For example, the use of the phoneme /'/ reveals an unjustifiable level of abstraction. It is quite difficult

for any reader of Hirayama to associate this phoneme with its phonetic reality. Observe the following set of phomene strings in terms of their phonemic notaton and the phonetic realization he gives (cf. Hirayama 1966, 25f):

/'i/	[ji]	/'o/	[o]
/'e/	[je]	/'j/	[j]
/'u/	[wu]	/'w/	[w]
/'ɨ/	[ɨ]	/'N/	[n]
/'a/	[a]		

Hirayama's notation as illustrated by the above examples, is so complex and abstrac t, that /'/ is realized as [j], [w], or Ø, depending on the segments which follow it. Hirayama uses this symbol in order to represent both syllables consisting of single vowels without a glottal stop, and semivowels without a glottal stop: e.g. [i], [j], etc.

It is one of the phonological features of the Ryukyu dialects that the morpheme initial vowels and semi-vowels are often preceded by a glottal stop element: e.g. Nas /ʔirabɨ/ [ʔirabɨ] 'to choose', and /ʔju'u/ [ʔju:] 'fish'. But I do not see the necessity of introducing a phoneme /'/ when /ʔ/ has already been clearly established. Once we have realized that word-initial vowels are preceded by a glottal stop, the repetition is pointless, and we need only mark the presence or the absence of the

glottal stop, but not both. For example, /ʔi/ and /i/ can, if need be, adequately denote the two contrasting syllables [ʔi] and [i].

Moreover, using /'/ causes such complexities in transcribing some words as follows:

Nas /'o'osa'N/ for [o:san] 'funny'
(cf. Hirayama 1966, 26f)

By retranscribing the above as /oosan/, we get a representation far closer to the phonetic quality [o:san].

As it happens, as far as our data are concerned, we do not find any examples for the contrast /ʔ/ :: /'/. In all cases, the morpheme initial vowels are preceded by [ʔ].

Therefore, we use neither /ʔ/ nor /'/ in our notation. We consider that word-initial vowels are preceded by a glottal stop. Only when we quote words from data other than our own will we use /'/: e.g. Yoro /'ja'/ [jai:] 'house' (Hirayama, 36f).

According to Hirayama, the glottal/non-glottal contrast is observed even in cases other than morpheme-initial vowels. For instance, Yoro /ʔju'u/ [ʔju:] 'fish' :: /'ja'a/ [ja:] 'house' (Hirayama, 36f). In such cases, however, I will represent the contrast by 'j$^{?}$' and 'j', since we will set up C$^{?}$/C for the non-aspirated/aspirated (or pharyngealized/non-pharyngealized, or glottalized/ non-

glottalized) series of consonants (cf. 4.1.6 below).

4.1.4 Replacing /N/ with /n/

In the traditional definition, /N/ is (as is /Q/, discussed below) a 'mora(ic) phoneme'. For this reason, and indeed for this reason alone, the phoneme /N/ has been set up by linguists in opposition to /n/ [n].

However, as far as both the data provided by Hirayama himself, and our own data are concerned, the appearance of /N/ and /n/ is in complementary distribution and, hence, completely predictable: the former stands only in the morpheme-final position, and the later in all other positions. For example, Nas nabï 'cooking pot' (50) vs. kuN 'this' (88).

Hirayama may, of course, have had other evidence for positing a phonemic contrast /N/ :: /n/, but he does not provide us with any evidence or reasoning. However, as these two phonemes appear strictly in complementary environments in our data, I will unify all sounds represented by /N/ and /n/ into /n/ for the present work.

4.1.5 Eliminated /Q/

According to the traditional view assumed by

Japanese linguists, the phoneme /Q/ is 'another moraic archiphoneme' (Vance (1987); 39f) known as 'sokuon'. The nature of this 'archiphoneme' varies according to the consonant which follows it. In other words, /Q/ represents the first element of a geminated consonant, the geminated consonant being a conspicuous element of Japanese phonology. Observe the following examples of Standard Japanese from Vance 1987 (40f):

orthographs	gloss	sound
a. happa	'leaf'	[hap:ˆpa]
b. hatta	'stuck'	[hat:ˆta]
c. hakka	'ignition'	[hak:ˆka]
d. hassha	'departure'	[haʃ:ˆka]
e. hatchu	'ordering'	[hac:ˆcʃw:]

The string of -QCV- generally has two moras, whereas -CV- has one. In this sense, -QC- is understood as a geminated consonant, or according to Vance (p.39f) a 'phonetic long voiceless obstruent '. Since our concern is not the minute analysis of Japanese phonetics, I would like to transcribe -QC- as simply [pp], [ss], etc.

Therefore, Vance's examples given above will be retranscribed as:

Vance's transcription	Our retranscription	No. of moras
a. /haQpa/	/happa/	3
b. /haQta/	/hatta/	3
c. /haQka/	/hakka/	3
d. /haQʃa/	/haʃʃa/	3
e. /haQtʃuu/	/hattʃu:/	4

Following this line, I will also transcribe the long consonant of the Amami dialects as /-CC-/ [-CC-]; e.g. /-pp-/ [-pp] etc.

4.1.6 Notation of non-aspirated consonants

In the Amami dialects (in fact, in almost all of the Ryukyu dialects) we find a contrast between aspirated and non-aspirated consonants. Historically speaking, this contrast is partially the bi-product of the loss of an earlier vocalic contrast traditionally known as *u/*o: viz. *C^hu > C^hu and *C^ho > Cu.

This deaspiration process is alternatively interpreted as glottalization or laryngealization according to the traditional approach of Japanese linguists such as Hirayama and Nakamoto.

Following Hirayama, I will represent this contrast by marking the glottalization rather than the

aspiration. This choice is based on the fact that the frequency of the aspirated, hence non-glottalized consonants, is much higher. Therefore marking glottalization is the most economical way of phonemically representing the contrast. I will use the notation of Nakamoto 1979, i.e. $C^{?}$, e.g. [$k^{?}$ugi] 'nail' (FN.1) rather than Hirayama's notation for the sake of convenience in typing.

4.1.7 /si/, /zi/, /ti/ vs. /ʃi/, /ʒi/, and /tʃi/

The Amami dialects have seven vowels (3.3.1). These seven vowels in combination with a preceding consonant, form seven types of syllable, i.e:

Ci Ce Cï Cë Ca Cu Co

In addition to these, we find listed by Japanese linguists the following types of syllable with a palatal glide:

Cja Cju Cjo

Footnote 1. Nakamoto 1979 gives the Ryukyuan forms only in phonetic notation.

These ten types of syllable form the main part of the syllable systems of the Amami dialects (FN.2).

For instance, we have, therefore, the following syllables for the case of the consonant [k] (/k/):

[ki ke kɨ kë ka ku ko]; [kja kju kjo]

However, in the case of [s], [z], and [t], we have [ʃ], [ʒ] and [tʃ] in front of [i]. For example, observe the following set, especially the first item in it:

[ʃi se sɨ së sa su so]; [ʃa ʃu ʃo]

In Standard Japanese, the traditional manner of phonemicizing is to represent [ʃi], [ʒi], and [tʃi] as /si/, /ti/, and /zi/ respectively. This is done because in SJ, the syllables [si], [ti], and [di] do not occur.

In the Amami dialects, on the other hand, there has been observed, though quite rarely, a contrast between [si] and [ʃi], for example, and Hirayama (1966, 24f) in his syllable inventory for Nas, includes [ti] and [tʃi]. However, as far as our data is concerned, this contrast does not appear at all.

Footnote 2. Note that we do very occasionally observe syllables in the shape of CwV; i.e. with a labial glide. However, as this is irrelevant to our present argument, we shall pass over this type of glide for the moment.

However, based on the phonetic reality, we will break with traditional Japanese linguistic practice, and use /ʃi/, /ʔi/ and /tʃi/.

4.1.8 Consonant /z/ for [dz]

In Japanese phonetics, the occurrence of [z] and [dz] remains a controversial problem. This is perhaps because the two phones appear to behave sometimes as allophones and sometimes as free variants. However, there will be no controversy in saying that they belong to the same phoneme, normally written as /z/.

A parallel phenomenon is observed in the Amami dialects. Observe the following from Hirayama 1966 (24f):

/zi/ /ze/ /zɪ̈/ /zë/ /za/ /zu/ /zo/ ; /zjo/
[dʒi] [dze] [dzɪ̈] [dzë] [dza] [dzu] [dzo] ; [dʒo]

According to the examples given in Hirayama, it seems that the [z] does not occur in the Amami dialects.

However, because it is more economical, and because, morphophonemically, it is the voiced counterpart of /s/ in the Modern Amami dialects, I will agree with Hirayama (and, in fact, with most of other Ryukyuan linguists), and use /z/ rather than /dz/ to represent [dz].

4.1.9 Using /ts/ for Hirayama's /ʠ/.

Hirayama 1966 uses /ʠ/ for the affricate [ts] ([t'z] in Hirayama). However, I will use /ts/ for convenience in typing.

4.1.10 PA accent system

For the purposes of our argument, note that reconstruction of a PA accent system has not been attempted. As it is irrelevant to the A/B system, we do not consider accent systems in our current reconstruction. We recognize, however, that an accent system might very well be relevant to problems related to other areas of study, for instance, long vowels, and so leave it for further study.

4.1.11 Summary - Phonemes used in reconstruction

Following are the consonant and vowel phonemes used in our data:

Figure 401. Phonemes used for reconstruction

Consonants:

Stops:

p	t		k
	t$^{?}$		k$^{?}$
b	d		g

Fricatives:

F	s	ʃ	h

Nasals:

m	n

Affricates:

ts	tʃ
z	ʒ

Tap:

r

Semi-vowels:

j	w
j$^{?}$	

Vowels:

	Front	Central	Back
High	i	ɨ	u
			U
Mid	e	ë	o
Low		a	

4.2 Principles of reconstruction

4.2.1 Informant notation

1) (-) indicates the informant did not respond.

2) Definite loans: (<L>) indicates that the informant stated 'this word is from Japanese'.

3) Possible loans: (<L?>) show the informant stated he or she thought the word might be from Japanese.

4) If the informant responded with doublets we give both forms (~).

5) When the same phoneme occurs more than once in a word, we use a and b to distinguish between them. E.g. the /u/'s in (117) mutu would be denoted by 117a and 117b.

4.2.2 Invalid cases

1) Unless we see three dialectal forms unmarked with <L> or <L?>, we do not attempt PA reconstruction.

2) If we see three marks for <L> or <L?> we

consider the material to be invalid for reconstruction.

3) If a word with an irregular reflex is also semantically deviant from OJ, we designate the comparison as invalid. The examples of this number only four, and are lexical items (5), (119), (168), and (173).

4) If we consider that a word is, although unmarked with <L?> or <L>, nonetheless clearly a loan word from MdJ, we consider it to be invalid. In fact we have only one lexical item of this kind, (260).

4.2.3 Irrecoverable cases

1) If we cannot decide between two segments which is the 'true' PA segment, we consider the segment to be irrecoverable and mark it with '_'; e.g. (103a,b) PA *j_k_.

2) If an entire PA word is made up of such segments, we consider it irrecoverable, and mark it IRC.

4.2.4 Position

1) Unless significant, we do not divide consonants according to their position in the word. Note that PA had no word-final consonants.

2) Vowels are always presented by position.

4.2.5 Glosses

1) Glosses are from OJ.

2) Unless specifically required, we do not give the dialectal gloss. When necessary (i.e when different from OJ), we cite dialectal glosses in our argument.

4.2.5 /U/ and /F/

1) Although /U/ is a potential phoneme of the MdAm dialects, it appears only sporadically in our data. We never see it throughout a lexical item. There is no case for setting up *U as a proto-segment, and its relevance as a marginal phoneme must be left for further study.

2) We have only a few cases of /F/ found in Sho, Ong, and Nas, and its phonemic status is very tentative. However, we have included /F/ in our inventory of phonemes because of its relevance to sound changes related to the subgrouping of the dialects (cf. 5.2).

4.2.7 Excluding a form in parenthesis

We exclude various forms (by putting the relevant form in parenthesis) given by informants from our reconstruction for several reasons.

1) If it is a conclusive form suffix (jun) or an adjective suffix (sa), we exlude it from reconstruction unless the verb stem final is affected.

2) If we decide a form is not cognate with the others in a lexical item, we exlude it from reconstruction; e.g. (83) Ong ju(ʒi)wa 'weak'; (113 Sho tun(kana) 'fellow'.

4.3 Consonants

4.3.1 PA *p

4.3.1.1 Pattern 1

In our data, we find eleven tokens of the correspondence series showing /p/ in San, /h/ in Yen and Yoa, /h/ or /F/ in Sho, Ong, and Nas, and /h/ or /hw/ in Sib (Pattern 1). Pattern 1 is observed only in word-final position.

For the occurrence of /F/ in Sho and Ong we find the following facts. In Sho, /F/ appears when the PA environment is _*a while /h/ occurs when it is _*i or _*u; e.g. (143) Faak 'box' vs. (79) hugur 'bag' and (128) hirju- 'wide'. The case of (261) hanĩ 'wing', with /h/ before /a/ is the only exception to this.

In Ong, /F/ appears when the PA environment is _*a and _*u, and /h/ appears before _*i. For example: (232) Fuʃi 'star' vs. (128) hiru- 'wide'. The /h/ of (157) is an exception to this. However, we should consider that (157) is the only case where the reflexes are at a word-boundary (this may also be the reason for Sib /hw/ in (157), since Sib has /h/ in all the other relevant lexical items).

From the above facts, we can infer that all the reflexes in Chart 401 are from the same proto-consonant, which we reconstruct as *p.

Chart 401. Modern reflexes for PA *p Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(79)	h	h	F<L>	F	h	h	p
128,153 261	h	h	h	h	h	h	p
143	h	F	-	h	h	h	p
(157)	hw	F	h	h	h	h	p
216	h	h	-	h	-	h	p
231, 232 233	h	h	F	h	h	h	p

Reconstructing *p, rather than *h or *F, will be seen to be the most appropriate choice if we consider the phonetic plausibility and systematic consistency of the PA plosive series: i.e. *p, *t, and *k (cf. 4.3.2 and 4.3.3 for *t and *k respectively); and *b, *d, and *g (cf. 4.3.4, 4.3.5, and 4.3.6 respectively).

Judging from its shape, I would suggest the possibility that Nas /Fukuro/ for 'bag' (79) is also a loan word from MdJ /Fukuro/ 'id'.

4.3.1.2 Pattern 2

We have another two examples to consider as coming from *p, but here the San slots are blank (Chart 402).

As far as these correspondence patterns are concerned, when the San slots are empty, there appears to be no telling whether the reflexes are from *p or *k. This is because, with the exception of the San slots, the patterns related to *p and *k in certain intervocalic environments (cf. 4.3.3) resemble one another very closely.

Note, however, that the environments for the above mentioned *p and *k cases are different. The eleven *p cases in Chart 401 are all found morpheme-initially, whereas the *k cases are found intervocalically between certain vowels (generally *ë) (cf. 4.3.3).

Because they occur in the morpheme-initial position, we shall therefore ascribe the reflexes found in (34) and (61) to PA *p.

Chart 402. Modern reflexes for PA *p Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
34	-	-	h	h	h	-	-
61	h	h	h	h	h	-	-

4.3.1.3 Sound changes for *p

The sound changes that we have found for *p are as follows:

*p	>	F / _a h / _i,u	in Sho
	>	F / _a,u h / _i	in Ong
	>	h	in Sib,Nas,Yen,Yoa
	>	p	in San

4.3.2 PA *t and allophone *ts

4.3.2.1 Pattern 1

From almost forty items with /t/ throughout (Pattern 1), we reconstruct PA *t (Chart 403).

4.3.2.2 Pattern 2

In (46) for 'mountain', San has /d/ instead of /t/, as does Nas in (165) for 'place'. I would like to posit that these reflexes are from *t. Hence, the initial consonant of the PA words has become /d/ for an unknown reason. We can classify them as exceptions to Pattern 1, and unrelated to the similar reflexes we find in Pattern 4.

Chart 403. Modern reflexes for PA *t Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
9,12,70,96,108, 110,114a,114b, 115,116,146,147 164,225, 246	t	t	t	t	t	t	t
8	t	t	t	t	-	t	t
15	-	t	t	t	-	-	t
67	t	t	-	-	-	t	-
71	t	t	-	t<L>	t<L>	t	t
72	t	-	t	t	t	t	t
73	t	t	-	-	t	t	t<L>
87	t	t	-	t	t	t<L>	t
95	t	t	t	-	t	-	-
105,169a 169b	t	t	t	t	t	-	t
107	t	t	t	t	-	-	t
111	t	-	t	t	t	t	t
112	-	t	t	t	t	-	-
113	t	t	t	t	-	-	-
117	t	t	t	t	t<L>	-	t
127	t	-	t	t	t	t	-
145b	-	t	t	t	t	-	t
162	t	t	t	t	t	t	-
167	t	t	t	t	-	t	-
191	t	t	-	t<L>	-	-	t
244	-	-	-	-	t	t	t

Chart 404. Modern reflexes for PA *t Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
46	t	t	t	t	-	-	d
165	t	t	t	d	t	t	t

4.3.2.3 Pattern 3 - allophone *ts

We find five tokens of a correspondence series which occurs both word-initially and word-medially (136) in the environment of _*i. As this pattern is in complementary distribution with *t, we set up *ts as an allophone of *t.

Chart 405. Modern reflexes for PA *ts Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(30)	t	t	ts	ts	ts<L?>	ts	s
48	t$^{?}$	t$^{?}$	ts	ts	ts	ts	ts
77	-	t$^{?}$	ts	ts	ts	ts	ts
136	-	t	ts	ts	ts	ts	ts
145a	-	ts	ts	ts	s	ts	ts

San /s/ in (30) and Yen /s/ in (145a) are exceptions.

The /ts/ in Sho (145a) is the only example we

find for /ts/ for either Shi or Sho in our data. We will consider it an exception to Pattern 3, where otherwise in Sib and Sho we find that /t/ or /t$^{?}$/ has replaced *ts. The choice of /t$^{?}$/ may be influenced by the following consonant (_ĩm in (48) and _ĩn in (77)), but we lack sufficient evidence for a firm determination. This pattern, in fact, shows an interesting situation and is open to several different interpretations. We present this argument as the most plausible explanation, and note the issue of *ts as a point for further study.

4.3.2.4 Pattern 4

In our data we have three cases where isolated /d/ appears in patterns otherwise consisting of /t/ throughout. This /d/ is (unlike Pattern 2) found in

Chart 406. Modern reflexes for PA *t Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(7)	t~+d	+d	t	t	t	t	t
163	+d	t	t	-	-	t	-
166	t	+d	t	t	t	-	t<L>

morpheme-initial position when the morpheme in question is attached to another one which precedes it.

The voicing which takes place in this particular environment is similar to an occurrence in Japanese generally known as the 'rendaku' (lit. 'voicing') phenomena. There can be no doubt that this 'rendaku' is a synchronic phenomenon in the MdA dialects too. The alternation of Sib +duk ~ toki 'time' (7) provides us with evidence for this.

Therefore the proto-segment for the above cases can be postulated to have been *t.

4.3.2.5 Sound changes for *t and *ts

We find that PA *t has remained unchanged, and that its allophone *ts has undergone the following change:

*ts	>	t or t$^{?}$	in Shi, Sho
	>	ts	elsewhere

4.3.3 PA *k and allophone *h

As discussed in the following subsections, there is good reason to assume that PA *k had an allophone *h. We will discuss the rather complex differences in environment of these two proto-segments in the following subsections.

Chart 407. Modern reflexes for PA *k Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
				*k-			
29,96, 155a,248, 249	k	k	k	k	k	k	k
67	k	k	-	-	-	k	k
76	k	k	k	-	k	k	k
95	k	k	k	-	k	-	-
97	k	-	k	k	-	-	k
100	-	k	k	k	k	k	k
(138)	k	k	k	k	k	k	p
196	-	k	k	k	k	k	k
205	k	k	k	k	k	-	-
222	k	-	k	k	-	k	k<L?>
223	k	k	k	-	-	-	-
250	k	k	k	k	k	k	-
				*-k-			
7,30, 102,103, 225,251, 252	k	k	k	k	k	k	k
105	k	k	k	k	k	-	k
254	k	-	-	k	k	-	k<L?>

4.3.3.1 Pattern 1 - *k

The correspondences listed in Chart 407 above

consist of MdA /k/ throughout. From these examples, we reconstruct *k.

San /p/ in (138) is an exception (cf. Chart 401 for PA *p in word-final position, and Chart 409 below for word-initial *k in complementary distribution).

4.3.3.2 Pattern 2 - *h

On the other hand, we find seven tokens of a correspondence series consisting mainly of /h/ and an infrequent Ø in Yen, Yoa and San (Pattern 2). From these correspondences, we reconstruct *h.

This *h, however, and *k reconstructed in 4.3.3.1 are found to be in complementary distribution in terms of their PA environments.

We find *h between *ə_*ə (44, 45, 46), *u_ə (56), *o_*o (155b, 160, and 165), and *a_*a (84) (FN.1). On the other hand,*k is found in the following environments: *u_*i (7), *ɨ_*i (30), *u_*u (102, 105), *u_*a (251, 252), ≠_ (nine lexical items, Chart 408) (FN.2).

Due to this distribution pattern, we must conclude that giving phonemic status to *h is not justifiable. Therefore, I shall recognize *h as an

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Footnote 1. The PA vowels before and after *h in (104) and (142) are irrecoverable because of the inconsistent shapes of the dialectal forms.
Footnote 2. The PA vowels before and after *k in (103) are also irrecoverable.

allophone of *k.

Chart 408. Modern reflexes for PA *k Pattern 2 - *h

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
44	h	-	h	h	Ø	Ø	Ø
45	h	h	h	h	h	Ø	h
46	h	h	h	h	-	-	h
56	h	h	h	h	h	h	-
84	h	h	h	h	h	h	h
(104)	-	h	h	h	h	h	Ø
(142)	h	h	h	h	h	-	h
(155b)	h	h	k	h	Ø	Ø	Ø
(160)	h	h	h	h	k	h	Ø
(165)	Ø~h	Ø	Ø	Ø	k	k	Ø

Yen /k/ in (160) is an exception.

The occurrences of Ø in (165) are caused by the dropping of of *h in this item, and are exceptions. Also, Yen and Yoa /k/ may be the result of lexical borrowing from MdJ tokoro 'id'. Note that we begin to find many examples of lexical borrowing in Yen and Yoa (cf. 4.4.3.3)

4.3.3.3 Pattern 3

The word-initial correspondences consisting of /h/ in San and /k/ throughout the other dialects may be the

best evidence for postulating that *k had allophone *h (Pattern 3).

This correspondence pattern is found to be in almost exact complementary distribution with Pattern 1 (Chart 407). The PA environments for Pattern 3 are ≠_*aCi (40, 41, and 42,), ≠_*i (25, 60, 157) and ≠_*u (43, 68, 91,92,101,87,141). The environment for (259) is irrecoverable. Pattern 1 has different environments (notably ≠_*o), with the following exception: (100) and (248), where *k is found in ≠_*u. We therefore ascribe Pattern 3 to *k.

Chart 409. Modern reflexes for PA *k Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
4,40,41,42, 68,91,92, 101,157, (259)	k	k	k	k	k	k	h
25	k	k	k	k	k	k	h
43	k	k	-	k	k	-	h
60	k	k	k	k	k	k	h
87	k	k	-	k	k	k	h
141	k	k ~ h	k	k	k	-	h
(57)	k	k	k	k	-	k	-
(58)	k	k	k	k	k	-	-
(216)	k	k	-	k	-	k	h

The correspondences of (57) and (58) are vacant

in the San slots. However, from the relevant PA environment, ≠_i, I posit that the San reflexes would be /h/. Hence, I will classify these items into Pattern 3.

4.3.3.4 Pattern 4

Correspondence Pattern 4, drawn from (88), (89), and (90) (Chart 410) may be lexically defined, and is, hence, an exception to Pattern 3.

From the initial consonants (/k/) of the lexical items in these three cases, and from the environments in which they are placed (≠_u), we are able to predict that Yoa and San would have /h/.

The initial elements of the lexical items in (88), (89), and (90) (u- in Yoa and San, and ku- in the other dialects: perhaps for 'this') must have come from a common PA source. This can be reconstructed as *ku- 'id'.

Chart 410. Modern reflexes for PA *k Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
88	k	k	k	k	k	Ø	Ø
89	k	-	k	-	k	-	Ø
90	-	k	k	k	k	Ø	Ø

4.3.3.6 Sound changes for PA *k and *h

PA *h has remained unchanged in all dialects. For PA *k, we have found the following sound changes:

*k > h / ë_ë
u_ë
a_a
o_o
} in every dialect

> n / ≠_Cĭ
≠_ĭ
≠_u
} in San

> k elsewhere

4.3.4 PA *b

4.3.4.1 Pattern 1

Chart 411. Modern reflexes for PA *b Pattern 1

Nos.	Sib	Sho	Ong	Nas	Yen	Yoa	San
50,60,68	b	b	b	b	b	b	b
108	ø	b	b	b	b	b	b
95	b	b	b	-	b	-	-
209	b	-	b	b	b	b	b
215	b	b	-	b	-	-	-

Seven items show the pattern consisting of /b/ throughout (Pattern 1, Chart 411)). From them, we reconstruct PA *b. Sib Ø in (108) is an exception.

4.3.4.2 Pattern 2

It is one of the sound changes specific to Sib and Sho that word-final *i (4.4.3.1) and *u (4.4.3.6) in the environment of C_≠ are lost.

This change has resulted in closed syllables for Sib and Sho. The voiced consonants which have thus become word-final, have subsequently been devoiced in both Sib and Sho (cf. 4.3.6.2 for *g; 4.3.8.2 for *z).

For instance, PA *tabi 'journey' > Sib tap 'id' and Sho tap 'id' (191). The correspondence pattern found in Chart 412 having /p/ in Sib and Sho, and /b/ in the other dialects (Pattern 2) is the result of this devoicing process.

Chart 412. Modern reflexes for PA *b Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
193	p	p	b	b	b	b	b
196	-	p	b	b	b	b	b
191	p	p	-	b<L>	b	b	b

4.3.4.3 Pattern 3

The correspondences of both (226b) and (238) include /b/ and /m/ (Chart 413).

Chart 413. Reflexes for PA *b Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
226b	b	b	b	b	b	m	m
238	b	m	b	b	b	b	b

I would put the presence of /m/ to lexical borrowing from MdJ; viz. (226b) Yoa mamor(in) 'to defend', San mamor(jun) 'id' :: MdJ mamor(u) 'id'; (238) Sho k$^{\gamma}$umo 'spider' :: MdJ kumo 'id'.

4.3.4.4 Pattern 4

One item shows a pattern consisting of /b/ and Ø. I have not found any environmental or other evidence to justify a sound change PA *b > Ø in Yen, Yoa, and San. Nor do we find any Japanese word(s) to suggest lexical borrowing. Therefore, I will simply treat this case as an exception.

Chart 414. Modern reflexes for PA *b Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
122	b	b	b	b	Ø	Ø	Ø

4.3.4.5 Sound changes for *b

For PA *b, we find the following sound changes:

*b	>	p / _i(>Ø)≠	in Sib, Sho
	>	b	elsewhere

4.3.5. PA *d

4.3.5.1 Pattern 1

We find eight cases supporting a correspondence series consisting of /d/ throughout (Chart 415). Therefore, we reconstruct *d.

4.3.5.2 Pattern 2

We treat the correspondence of (11) as a case of the 'rendaku' phenomena (cf.4.3.2.4) in PA.

Chart 415. Modern reflexes for PA *d Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
17,45 75,118	d	d	d	d	d	d	d
74	d<L>	-	d	d	d	d	d
76	d	d	d	-	d	d	d
198	-	d	d	d	d	d	d

The /d/ in (11) found throughout the dialects with the exception of San is, in all cases, the initial segment of the second element of a compound word for 'spirit of the dead' (observe this in the master list).

The San word tʃuuntamasii should be analyzed as tʃuu 'person' (cf. (10) San tʃu 'person') plus a genitive marker n plus tamasii (perhaps tama + sii). Consider that we have no evidence that 'rendaku' applies when the element in question follows a genitive marker in MdA.

Based upon the above argument, we must consider that, as a compound word, the initial phoneme of the second element was *d.

Unless PA had this *d as a 'rendaku' case, we cannot account for the fact that all the modern dialects (except San, in which tamasi is not considered to be part of a compound word) show *d for this case.

Chart 416. Modern reflexes for *d Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
11	d	d	d	d	d	d	t

4.3.5.3 Sound changes for *d

PA *d has been retained as /d/ in all the modern dialects to the present day.

4.3.6 PA *g

4.3.6.1 Pattern 1

We have twelve items with the correspondence /g/ throughout. We reconstruct PA *g from them (Pattern 1).

Sib /k/ in (158) is an exception. The reflex /g/ in Ong, Nas, and Yen stands as the initial consonant of the second element of a compound word (cf. master list). It is a retention of PA *g, which is hence relevant to the 'rendaku' phenomena (cf. 4.3.2.4; 4.3.5.2) of PA. The Sib /k/, on the other hand, is the initial segment of an independent word, kumor 'to shout'. As we have in this series three +/g/'s and one /k/, we will treat the reconstruction as a case of 'rendaku'.

Chart 417. Modern reflexes of PA *g Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
31,32,40, 147,161	g	g	g	g	g	g	g
65	-	-	g	g	-	g	g
67	+g	+g	-	-	-	+g	-
91	g	-	g	g	g	g	g
99	+g	+g	+g	+g	+g	-	-
106	g	g	g	g	-	g	g
113	+g	-	+g	+g	-	-	-
127	g	-	g	g	g	g	-
(158)	≠k	-	+g	+g	+g	-	-
162	g	g	g	g	g	g	-

4.3.6.2 Pattern 2

We have a correspondence series consisting of /k/

Chart 418. Modern reflexes for PA *g Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
186	k	-	g	g	-	-	g
187	k	k	g	-	g	g	g<L>
201	k	k	g	g	g	g	g
245	k	k	g	g	g	g	g

in Sib and Sho, and /g/ in the other dialects (Pattern 2). We can relate this pattern to the devoicing process of PA *b as seen in Sib and Sho (cf. 4.3.4.2).

4.3.6.3 Sound changes for *g

For PA *g, we have found the following sound changes:

*g	>	k / _i,u(>Ø)≠	in Sib, Sho
	>	g	elsewhere

4.3.7 PA *s

PA has *s, which has remained as /s/ in the seven modern dialects regardless of environment, with a few rare exceptions (Chart 419).

4.3.7.1 Pattern 1

The Nase /ʃ̃s/ in (258) may be due to lexical borrowing from MdJ or Kyushu dialect (hereafter Kyu), cf. Nas ase ~ aʃe 'sweat', MdJ ase 'id', and Kyu aʃe 'id'. For Nas aʃe 'id', refer to Nas kaze 'wind', which may be from MdJ kaze 'id', or Kyu kaze 'id' (259).

Chart 419. Modern reflexes for PA *s

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
32,44, 245,249	s	s	s	s	s	s	s
80	s	s	s	s	-	s	s
130	s	-	s	s	-	s	s
(131)	ss	s	-	-	s	-	-
133	s	-	s	-	-	s	-
150a,b	s	-	s	s	s	s	s
184	s	s	-	s	-	-	s
(212)	ʃ	s	s	s	s	s	s
(224)	s	s	s	s	s	ss	ss
(258)	s	s	s	s~ʃ	s	s	s

The /ʃ/ in Sib (212),

must be treated as exceptional.

The occurrences of /ss/'s in Sib (131) and Yoa (224) are exceptions.

4.3.7.3 Sound changes for *s

We have found the PA *s has not undergone any sound changes to date.

4.3.8 PA *z

Evidence in support of the existence of *z in PA is neither plentiful nor powerful. We find only three lexical items exemplifying it, as observed in the following subsections.

However, it is nevertheless possible to justify the reconstruction of *z, for although our cases are few in number, they show a certain consistency in their patterning.

4.3.8.1 Pattern 1

We find two items with a correspondence series consisting of /d/ in Sib and Sho, and /z/ in the other dialects.

Observe how *z contrasts with *d; e.g. (92) *kuzu 'last year' vs. (17) *wuduri 'dance, jumping'. We therefore reconstruct *z from these correspondences.

Chart 420. Modern reflexes of PA *z Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
92	d	d	z	z	z	z	z
259	d	d	z	ʒ	z	z	z

We find /ʒ/ in Nas in the correspondence of (259). The syllable is /ʒe/. This may be due to lexical borrowing from Kyu kaʒe 'wind' (cf. 4.3.7.1).

4.3.8.2 Pattern 2

Pattern 2, discussed in this subsection, is represented by only one item. However, it becomes of particular interest if we observe it in parallel to PA *b and *g, which became /p/ amd /k/ respectively in word-final position in Sib and Sho (cf. 4.3.4.2 and 4.3.6.2). Observe that we have /d/ in Sib and Sho in (92) and (259), whereas we have /t/ in (203), where the reflex is in word-final position.

We can therefore reasonably ascribe the reflexes of (203) to the same PA segment as those of (92) and (259), that is to PA *z.

Chart 421. Modern reflexes for PA *z Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
203	t	t	z	z	z	z	z

4.3.8.3 Sound changes for PA *z

We have found the following sound changes for PA *z:

*z	>	d / _u	in Sib, Sho
		t / _i≠	
	>	z / elsewhere	

4.3.9 PA *ʃ

4.3.9.1 Pattern 1

We have four tokens of a correspondence series with /ʃ/ throughout (Chart 422). From them we reconstruct *ʃ for PA (FN.3).

Chart 422. Modern reflexes for PA *ʃ Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
82	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ
115	-	-	-	-	-	ʃ	ʃ
211	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	-
(104SF)	-	ʃ	-	-	-	ʃ	ʃ

Footnote 3. For (4), (87), (205), see the immediately following subsection.

4.3.9.2 Pattern 2

The pattern consisting of /s/ in Nas and /ʃ/ throughout the other dialects is found in the seven items listed in Chart 423 below.

Chart 423. Modern reflexes for PA *ʃ Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
21,60, 232,252	ʃ	ʃ	ʃ	s	ʃ	ʃ	ʃ
8	ʃ	ʃ	ʃ	s	ʃ	ʃ	ʃ
15	-	-	ʃ	s	_	-	ʃ
149	-	ʃ	ʃ	s	ʃ	ʃ	ʃ
(4)	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ
(87)	ʃ	ʃ	-	ʃ	ʃ	ʃ	ʃ
(205)	ʃ	ʃ	ʃ	ʃ	ʃ	ʃ	-

This pattern is found when the environment comes from PA _*i.

Three lexical items (4, 87, and 205) are exceptions to this Pattern. However, it is very likely that Nas /ʃi/ in (205) is caused by interdialectal lexical borrowing; cf. (205) Nas këëʃi, from PA *kë:ʃi 'tidal wave caused by typhoon', is culturally very specific. Thus, Nas kuʃi 'waste' in (4) and Nas kutuʃi (87) are the only unexplainable items which I will define as exceptions.

Therefore I shall ascribe the reflexes in Chart 425 to PA *ʃ.

For this ascription, remember also why we decided to phonemicize /ʃi/, /ʒi/, and /tʃi/ for the Amami syllables [ʃi], [dʒi], and [tʃi] respectively, rejecting the traditional phonemicization of /si/, /zi/, and /ti/. This was because we respected the phonetic reality rather than the more abstract phonemicization seen in Hirayama (1966). This approach has been used in setting up our PA phonemes too.

4.3.9.3 Sound changes for PA *ʃ

We have found the following sound change for PA *ʃ:

*ʃ	>	s / _i	in Nas
		ʃ	elsewhere

4.3.10 PA *ʒ

We find only one set of corresponding reflexes that lead us to the reconstruction of *ʒ for PA. As was the case for *z in 4.3.8, this reconstruction can be supported by examining it with reference to *ʃ and the devoicing phenomena of word-final consonants in Sib and

Sho.

Chart 424. Modern reflexes for PA *ʒ

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
146	tʃ	tʃ	ʒ	z	ʒ	ʒ	ʒ

Observe first the /z/ in the Nas slot. This /z/ is found before /i/.

For (146), let us refer to the fact that PA *ʃi has become /si/ in Nas (4.3.9.2).

Sib and Sho /tʃ/ in (146) can be accounted for by a phenomenon parallel to the devoicing phenomena of word-final voiced consonants (e.g. 4.3.4.2 for *bi > pɨ in Sib and Sho, etc.).

Based upon the above examination, we shall recognize the existence of *ʒ in PA.

4.3.10.1 Sound changes for PA *ʒ

We have found the following sound changes for *ʒ:

*ʒ	>	tʃ / _iɨ	in Sib,Sho
	>	z / _i	in Nas
	>	ʒ	elsewhere

4.3.11. PA *tʃ

4.3.11.1 Pattern 1

In all environments other than _*i, we find correspondences consisting unpredictably of /ttʃ/ and /tʃ/, with isolated exceptions /t/ and /ʃʃ/ (Pattern 1). This denotes that Pattern 1 and 2 are found in complementary distribution. Therefore, the reflexes of the two patterns should be ascribed to the same proto-segment.

Chart 425. Modern reflexes of PA *tʃ Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
10	ttʃ ~ tʃ	tʃ	ttʃ	ttʃ	ttʃ ~ tʃ	ttʃ	tʃ
11	ttʃ	tʃ	ttʃ	ttʃ	ttʃ ~ tʃ	tʃ	tʃ
14	ttʃ	tʃ	tʃ	ttʃ	-	tʃ	tʃ
15	-	tʃ	tʃ	ttʃ	-	-	tʃ
16	tʃ	tʃ	tʃ	t	ʃʃ	-	t
100	ʃʃ	ʃʃ	ʃʃ	ttʃ	-	tʃʃ	ʃ
125	-	-	-	-	tʃ	tʃʃ	tʃ
228	ttʃ	ttʃ	ttʃ	ttʃ	ttʃ	ttʃ	ttʃ

4.2.11.2 Pattern 2

We find two items of a correspondence series

with /ts/ in Nas and /tʃ/ in the other dialects (with an exception /ttʃ/ in Yen and San (235)). The common environment for these correspondences is PA *_i which has become /ɨ/ in Nas. Thus, the relevant Nas syllable is /tsɨ/.

Based upon the parallel phenonemon with /sɨ/ in Nas and /ʃi/ in the other dialects (cf.4.3.9.2), we reconstruct *tʃ for PA.

Chart 426. Modern reflexes for PA *tʃ Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
124	tʃ	tʃ	tʃ	ts	tʃ	tʃ	tʃ
235	tʃ	tʃ	tʃ	ts	ttʃ	tʃ	ttʃ

4.3.11.3 Sound changes for PA *tʃ

We find the following sound change for PA *tʃ:

*tʃ	>	ts / _i	in Nas
		tʃ / _i	in the other dialects
	>	ttʃ or tʃ	in other environments

Note that a strong case can be made for reconstructing *s and *ts, rather than *ʃ and *tʃ, but that we have chosen to present the latter.

4.3.12 PA *m

Chart 427. Modern reflexes for PA *m Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
			*m-				
27,53a,62,78a, 125,126,207, 230a,234,235, 252	m	m	m	m	m	m	m
16	m	m	m	m	m	-	m
(22)	m	m	Ø	m	Ø	Ø	Ø
(23)	m	m	m	m	m	Ø	m
63	-	-	m	m	m	m	m
64	m	-	m	m	m	-	-
65	-	-	m	m	-	m	m
73	m	m	-	-	m	m	m<L>
85	m	m	m<L>	m	m	m	m
117	m	m	m	m	m<L>	-	m
127	m	-	m	m	m	m	m
142	m	m	m	m	m	-	m
194	m	m	m	m	m	-	m
199a	-	m	m	m	m	m	m
210	-	m	m	m	m	-	m
211	m	m	m	m	m	-	m
217	m	m	-	m	-	-	-
(226a)	m	m~n	m	m	m	m	m
237	m	-	m	m	m	-	m<L>
255	m	m	m	m	-	m	m

4.3.12.1 Pattern 1

We have numerous examples for the correspondence pattern consisting of /m/ throughout (Chart 427). We reconstruct *m for PA from these examples. Note that this pattern is observed only in word-initial position.

The occurrences of Ø in Ong, Yen and Yoa (22) are exceptions.

The occurrence of Ø in San (22) is also an exception, and unrelated to the argument presented in the next sub-section.

Sib doublet /n/ in (226a) is an exception.

4.3.12.2 Pattern 2

However, PA *m has been lost in San in intervocalic position. This sound change has created a correspondence pattern having Ø in San (Chart 428).

Four cases (11, 23, 28, 29, 169, 236a) in Chart 428 are exceptions, unexplainably showing /m/ in San.

Although the San slots are blank for six lexical items, we can ascribe them to Pattern 2 based on their word-medial position.

The case of (230a,b) is the single example of the consonant string *mm. Note that the second /m/ has been lost in San.

Chart 428. Modern reflexes for PA *m Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
37,41,42,48 53b,78b, 164,230b	m	m	m	m	m	m	Ø
(35)	m	m	m	n ~ m	n	m<L>	Ø
43	m	m	-	m	m	-	Ø
97	m	-	m	-	-	-	Ø
118	-	-	m	m	-	m	Ø
123	m	-	m	m	m	m	Ø
130	m	-	m	m	-	m	Ø
135	m	-	m	m	-	m	Ø
145	-	m	m	m	m	-	Ø
149	-	m	m	m	m	m	Ø
179	m	m	m	m	-	m	Ø
(11,29, 236a,230a)	m	m	m	m	m	m	m
(23)	m	m	m	m	m	Ø	m
(28)	-	m	m<L>	m	m	m	m
(169)	m	m	m	m	m	-	m
(112)	-	m	m	m	m	-	-
(158)	m	-	m	m	m	-	-
(163)	m	m	m	-	-	m	-
(167)	m	m	m	m	-	m	-
(220)	m<L>	m<L>	m	m	m	m	-
(223)	m	m	m	-	-	-	-

4.3.12.3 Pattern 3

We find two tokens of a correspondence series with /m/ in Sho, /n/ in San, with /m/ or /n/ in the other dialects and Sib blank in both cases). This correspondence pattern is observed only in the environment of _*i: (cf. 4.4.1.3.1).

Chart 429. Modern reflexes for PA *m Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
199b	-	m	n	n	n	n	n
200	-	m	m	m	-	m	n

4.3.12.4 Sound changes for PA *m

We have found the following sound changes for *m:

*m	>	Ø / V_V	in San
	>	m	elsewhere

4.3.13 PA *n

PA had *n which has not undergone any changes to the time of MdAm. Examples for this are ample (Chart 430).

Chart 430. Modern reflexes for PA *n

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
23,50,70.84, 88,121,122, 123,126,157, 160,161, 201;233,241 251,261	n	n	n	n	n	n	n
6	n	-	n	-	n	n	n
18	n	-	n	n	n	n	n
19	n	n	n	n	n	-	n
67	n	n	-	-	-	n	-
77	-	n	-	n	n	n	-
89	n	-	n	-	n	-	n
97	n	-	n	n	-	-	n
106	n	n	n	n	-	n	n
113	n	n	n	n	-	-	-
127	n	-	n	n	n	n	n
166	n	n	n	n	n	-	n<L>
171	n	-	n	n	n	n	n<L>
172	n	-	n	n	n<L>	-	-
198	-	-	n	n	n	n	n

4.3.13.2 Sound changes for PA *n

As we observed in the previous subsection, we find that PA *n is retained as /n/ everywhere in every modern dialect.

4.3.14 PA *r

PA *r, like *n discussed in 4.3.14 above, is well-preserved in the modern Amami dialects (Chart 433).

Chart 433. Modern reflexes for PA *r

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
9,17,68,148, 153,155, 165,226, 248	r	r	r	r	r	r	r
6	r	-	r	-	r	r	-
18	r	-	r	r	r	r	r
19	r	r	r	r	r	-	r
28	-	r	r<L?>	r	r	r	r
34	-	-	r	r	r	-	-
65	-	-	r	r	-	r	r
71	r	r	-	r<L>	r<L>	r	r
79	r	r	r<L>	r	r	r	r
90	-	r	r	r	r	r	r
99	r	r	r	r	r	-	-
102	r	-	r	r	r	r	r
106	r	r	r	r	-	r	r
111	r	-	r	r	r<L>	r	r
(113)	rj	-	r	r	-	-	-
121	r	-	r	r	-	r	r
122	r	-	r	r	r	r	r
127	r	-	r	r	r	r	-

129	-	r	r	r	-	r	r
134	-	-	-	r	-	r	r
149	-	r	r	r	r	r	r
152	-	-	r	-	r	r	r
158	r	-	r	r	r	-	-
160	-	-	-	r	-	r	r
163	r	-	-	-	-	r	-
172	r	-	r	r	r<L>	-	-
175	r ~ d	r	r	r	-	r	r
176	r	r	-	r<L>	r	r	r
180	-	r	r	r	r	r	r
202	r	-	-	r	r	r	r
215	r	r	-	r	-	-	-
220	r<L>	r<L>	r	r	r	r	-
237	r	-	r	r	r	-	r<L?>
247	r	r	r	r	r	-	r
250	r	r	r	r	r	r	-
255	r	r	r	r	-	r	r

Shi /rj/ in (113) is the only exception to this pattern.

4.3.15.2 Sound changes for PA *r

PA *r has not undergone any sound changes.

4.3.15 PA *j

4.3.15.1 Prevocalic *j

We find a correspondence series of 20 items with /j/ throughout. From them we reconstruct *j for PA.

Chart 432. Modern reflexes for PA *j

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
75,84,103,118, 189,214	j	j	j	j	j	j	j
35	j	j	j	j	j	j<L>	j
74	j<L>	-	j	j	j	j	j
83	j	j	j	-	j	-	j
(85)	n	j	n<L>	j	j	j	j
89	j	-	j	-	j	-	j
102	j	-	j	j	j	j	j
132	-	-	j	j	-	j	j
133	j	-	j	-	-	j	-
134	-	j	-	j	-	j	j
135	j	j	j	j	-	j	j
136	-	j	j	j	j	j	j
152	-	-	j	-	j	j	j
175	j	j	j	j	-	j	j
200	-	j	j	j	-	j	j
209	j	-	j	j	j	j	j
217	j	j	-	j	-	-	-
254	j	-	-	j	j	-	j<L?>

Sib /n/ in (85) is an exception, which may be the result of the change _*jo in PA *majo 'cocoon' to /n/, but the cause of the change remains unexplained.

4.3.15.2 Postconsonantal *j

We find eight lexical items with palatalized consonants in Sib and Sho (exceptions being Sho /n/ in (124) and blanks in (192) in both dialects), with unpredictably scattered palatalized consonants elsewhere.

These cases are found both word initially, and word-medially in the environment *i_V. As we find contrasting unmarked C; e.g. (153) *piru vs. (128) *pirju we therefore ascribe these cases to *Cj.

Chart 433. Modern reflexes for PA *Cj

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA
				-*Cj-				
20	nj	nj	n	-	nj	n	n	*nj
21	rj	rj	r	r	r	r	r	*rj
22	nj	nj	n$^{\text{ʔ}}$j	mj	nj	nj	nj	*nj
73	nj	nj	-	-	n	nj	n<L>	*nj
(124)	nj	n	n$^{\text{ʔ}}$j	n$^{\text{ʔ}}$j	n	n$^{\text{ʔ}}$j	n$^{\text{ʔ}}$j	*nj
128	rj	rj	r	r	r	r	r	*rj

				*Cj-				
192	-	-	nj	nj	nj	nj	nj	*nj
204	kj	kj	k	kj	kj	kj	h	*kj

4.3.15.3 Sound change for PA *j

PA *j has been retained as /j/ everywhere in all the modern dialects.

PA *Cj has undergone the following sound changes:

*Cj	>	Cj	in Sib, Sho
		Cj or C	unpredictably elsewhere

4.3.16 PA *w

We have numerous tokens of a correspondence series consisting of mostly /w/ with scattered Ø's. Therefore, we reconstruct *w for PA.

Although our data does not happen to contain any examples of word-initial /w-/ other than /wu/, Hirayama (1966) attests the existence of word-initial /wa/.

The sporadic occurrence of Ø in the word-initial environment of _*u is unexplainable. However, the occurrence of Ø in word-medial position in Sib and Sho may

be related to the environment _*a.

Chart 434. Modern reflexes for PA *w

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
			*w-				
31,241	w	w	w	w	w	w	w
12	w	w	Ø	w	w	w	w
17	w	Ø	w	w	w	w	w
56	w	w	w	w	w	Ø	-
178	w	Ø	w	w	w	w	w
201	w	w	w ~ Ø<L?>	w	w	ØL?>	w
239	w	w	w	Ø	w	-	-
240	w	-	w	w	w	-	w
242	-	w	w	w	w	w	w
			-*w-				
83	Ø	Ø	-	w	-	w	

4.3.16.1 Sound changes for PA *w

We find the following sound changes for PA *w:

PA *w	>	Ø _a	in Sib, Sho
		w	elsewhere

4.3.17 PA *k^{7} and allophone *kk

4.3.17.1 Pattern 1

If we gather from our data all the correspondences with /k^{7}/ and/or /kk/, we find patterns which can be summarized as belonging to two types:

1) patterns having /k^{7}/ (Pattern 1)
   Eg. (20) k^{7} k k^{7} - kk k^{7} k
2) patterns not having /k^{7}/ (Pattern 2)
   Eg. (183) k k k kk kk k k

These two patterns are found in complementary

Chart 435. Modern reflexes for PA *k^{7} Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
20	k^{7}	k	k^{7}	-	kk	k^{7}	k
148	k	k	k	k	k^{7}	kk	kk
176	k^{7}	k	-	k<L>	kk	k	k
179	k^{7}	k^{7}	kk	kk	-	k^{7}	k^{7}
180	-	k	kk	k	kk	k^{7}	k^{7}
187	k^{7}	k^{7}	k	-	k	k	k<L>
202	k^{7}	k	k	k	k	k	k^{7}
203	k^{7}	k^{7}	k	k	k	k	k
238	k	k^{7}	k^{7}	k	k	k	k
(255)	k^{7}	h	k	k	-	kk	_

distribution; viz. Pattern 1 is found word-initially and Pattern 2 intervocalically. Therefore we set up *k^{ʔ} and its allophone *kk.

Although we see a clear complementary distribution, the patterning is nonetheless very undifferentiated, an inconsistency perhaps pointing to a merger with the reflexes of *k.

Sho /h/ in (255) from Chart 435 is an exception.

Chart 436. Modern reflexes of PA *kk Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
79	kk	g	k<L>	k	kk	k	kk
140	k	g	k	k	k~kk	-	-
(143)	k	k	-	kk	k^{ʔ}	kk	kk
182	k	-	k	k	k	kk	k
183	k	k	k	kk	kk	k	k
184	k	k	k	kk	k	-	k
194	k	k	k	kk	k	-	k

Note that in Chart 436, Yen /k^{ʔ}/ in (143) is an exception, being the only example of /k^{ʔ}/ in the intervocalic position. Sho /g/'s in (79) and (140) are also exceptions.

4.3.17.2 Sound changes for PA *k^{ʔ}

We find the following sound changes for PA *k^{ʔ}:

*k^{ʔ} > k^{ʔ}, kk, k / ≠_
*kk > kk, k / V_V
} in all dialects

4.3.18 Tentative reconstructions: PA *t^{ʔ}, *j^{ʔ} and *kkw

We find three instances where only limited data (one or two lexical items) leads us to reconstruct tentative proto-segments for various reasons.

4.3.18.1 PA *t^{ʔ}

Although this reflex is found in just one item, we tentatively reconstruct *t^{ʔ}, noting its parallelism with *k^{ʔ} (4.3.17).

Chart 437. Modern reflexes for PA *t^{ʔ}

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA
13	t^{ʔ}	t^{ʔ}	t^{ʔ}	tt	t^{ʔ}	t^{ʔ}	t^{ʔ}	*t^{ʔ}

4.3.18.2 PA *j^{ʔ}

We find one case with /j^{ʔ}/ in Sho, Ong, Nas, Yen, San, and an exception /j/ in Yoa and blank in Sib. Because this item contrasts with (132) PA *ju 'lifetime' we reconstruct *j^{ʔ}.

Chart 438. Modern reflexes for PA *j^{ʔ}

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
243	-	j^{ʔ}	j^{ʔ}	j^{ʔ}	j^{ʔ}	j	j^{ʔ}

4.3.18.3 PA *kkw

We find one example with labio-velar /kkw/ throughout. Based on contrasts such as (41) *kamï 'pot' vs. (66) *kkwa 'child' we tentatively reconstruct *kkw.

Chart 439. Modern reflexes for PA *kkw

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
66	kkw	kkw	kkw	kkw	kkw	kkw	kkw

4.4 Vowels

4.4.1 PA *i

4.4.1.1 Word-initial *i

In our data, we find three correspondence series for PA *i-. As close examination is required for each case, I will provide full lexical information in the following sub-sections.

4.4.1.1.1 Pattern 1.

The words in (37) for 'dream' show a pattern as shown in Chart 440 below:

Chart 440. Modern reflexes for PA *i- Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
37a	imɨ	imɨɨ	imɨ	imɨ	imɨ	imɨ	jʔuu
	i	i	i	i	i	i	jʔ

Note that lexical item (37a) is an example for PA *m > Ø / V_V in San (cf. 4.3.12.2). I presume that the seemingly irregular San reflex is caused by the loss of *m. The glottalization of the initial consonant may be taken

as evidence in support of our comparison of San /jˀ/ with /i/ in the other dialects. Remember that in the Amami dialects word-initial vowels are always preceded by a glottal stop, which, however, we excluded from our phonemic inventory because it is not contrastive (cf.4.1.3). Thus, we have additional support for our ascription of this case to PA *i.

4.4.1.1.2 Pattern 2

In the case of (124a) PA *i- has been lost in all dialects other than Sib and Sho. A similar change is exemplified by (22), discussed in 4.4.1.2.4 as a word-medial case. Observe the similarity in the reconstructed proto-forms for (124) and (22), and their modern words in our master list (Appendix One). Claiming *i for both these cases is justified by the fact that iʃo is a characteristic structure of PA (i.e. palatal consonants are always observed after *i). Other examples are *kˀinjuu 'yesterday' (20), *ʃirju 'white' (21), *iʃo 'beach' (82). We shall therefore ascribe the word-initial reflexes of (124a) to PA *i-.

Both cases (22 and 124a) have to be treated as exceptions to the general retention of *i.

Chart 441. Modern reflexes for PA *i- Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(124a)	inotʃ ~ injootʃ i	inotʃ i	nʔjutʃi ø	nʔjuutsï ø	nutʃi ø	nʔjutʃi ø	nʔjutʃi ø

4.4.1.1.3 Pattern 3

We recognize in our data another correspondence series consisting of /i/ and blanks. Because of its regularity we can ascribe it to PA *i-.

Chart 442. Mod. reflexes for PA *i- Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
82	iʃo i	iʃo i	iʃo i	iso ~ iʃo i	iʃo i	iʃo i	-
36	ikee ~ ike i	-	ihe i	-	ike i	ihi i	ike<L?> i

4.4.1.2 Word-medial *i

4.4.1.2.1 Pattern 4

We find a correspondence series consisting of /i/

throughout in the word-medial position (Chart 443).

Chart 443. Modern reflexes for PA -*i- Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
128,153, 202,203	i	i	i	i	i	i	i
16a	i	i	i	i	i	-	i
20	i	i	i	-	i	i	i
34	-	-	i	i	i	-	-
73	i	i	-	-	i	i	i<L>
176a	i	i	-	i<L>	i	i	i
180	-	i	i	i	i	i	i
199a	-	i	i	i	i	i	i
211	i	i	i	i	i	-	i
(194a)	ii	ii	i	i	i	-	i

Sib and Sho /ii/'s in (194a) are exceptions to Pattern 4, possibly caused by the fact that (194) is a monosyllabic word.

4.4.1.2.2 Pattern 5

Nas has ĩ when the immediately preceding consonant is /s/ (Pattern 5) (FN.4).

Footnote 4. For PA *ʃi, *tʃi > Nas sĩ, tsĩ respectively, see also 4.4.1.3.1, Chart 448; 4.4.1.3.2, Chart 450; 4.3.9.2, Chart 423; and 4.3.11.2, Chart 426.

Chart 444. Modern reflexes for PA -*i- Pattern 5

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
21	i	i	i	ĩ	i	i	i
149	-	i	i	ĩ	i	i	i

4.4.1.2.3 Pattern 6

We find that (179) shows /j/ in San, with the other dialects showing /i/. This phenomenon has already been mentioned in 4.4.1.1.1 for word-initial *i (37). The two cases (37 and 179), despite the difference in position, resemble one another in that *m is lost in San, and the /j/ in San corresponds to the /i/ of the other dialects. Therefore we shall simply ascribe the correspondence in (179) to *-i-.

Chart 445. Modern reflexes for PA -*i- Pattern 6

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
179	kʔimu	kʔimo	kkimu	kʔimo	-	kʔimo	kʔjoo
	i	i	i	i	-	i	j

4.4.1.2.4 Pattern 7

The case of (22) parallels, as we have seen, (124a) examined in the sub-section on word-initial *i. For our ascription of it to PA *-i-, refer to 4.4.1.1.2.

This loss of PA *i in San is found in the environment *m_nj which is common to both cases. However, the correspondence consisting of /i/ throughout is found in the same environment in and (73) (Chart 443). Thus, as mentioned above, (22) and (124a) must be treated as exceptions to *i > i / _Cj in our examination.

Chart 446. Modern reflexes for PA *-i- Pattern 7

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(22)	minjo~ minjoo	minjo~ minjoo	n$^{\gamma}$jo	mmjo	njo	njo	njuu
	i	i	Ø	Ø	Ø	Ø	Ø

4.4.1.3 Word-final *i - i_A and i_B

4.4.1.3.1 Pattern 8 and 9 - i_A

We find a correspondence series in word-final position with /i/ throughout, in the environment *C_ with any C except *ʃ or *tʃ. Sib and Sho once again show a frequent long vowel /ii/.

Chart 447. Modern reflexes for PA *i_A Pattern 8

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
18	ii	-	i	i	i	i	i
19	ii	ii	i	i	i	-	i
(23)	ii ~ i	i	i	i	i	u	Ø
27,31,32	i	ii	i	i	i	i	i
65	-	-	i	i	i	-	i
111,183	i	i	i	i	i	i	i
182	ii	-	i	i	i	i	i
184	i	i	-	-	-	-	i
(199b)	-	i	Ø	Ø	Ø	Ø	Ø
(200)	-	i	i	i	-	i	Ø

The occurrence of Ø in (199b) and (200) is related to the change of *m to word-final *n (cf. 4.3.12.3). San /-i/ in (23) has dropped off but has left word-final /m/ behind, which is exceptional.

Yoa /u/ in (23) is an exception. So is the fact that in Yoa nuu 'chisel' (23), the *m is lost. The /u/ is, obviously due to assimilation by the preceding /u/, as the *m disappeared from between the earlier *u and *i.

In complementary distribution with Chart 447, we find Chart 448, where Nas has /ɪ/ in the environment *ʃ, *tʃ_ (cf. 4.3.9.2 and 4.3.22.1).

Chart 448. Modern reflexes for PA *i_A Pattern 9

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
(8)	ii	i	i	ĭ	-	i	i
(15)	-	-	i	ĭ	-	i	i
(235)	ii	ii	i	ĭ	i	i	i

4.4.1.3.2 Patterns 10 and 11 - *i_B

We find a correspondence series in word-final position consisting of Ø in Sib and Sho, and /i/ in the other dialects. In parallel with Patterns 8 and 9, with which Patterns 10 and 11 contrast, we find first a pattern in the environment *C_ with any C except *ʃ, *tʃ, or ʒ (Pattern 10, Chart 449). This pattern occurs in the same environments as Pattern 8 above. Because of the clearcut overlapping of environments, and the high number of examples, we will set up *i_B for PA.

Both Sib and Sho have doublets in (30); i.e. Sib tĭkii ~ udëk (perhaps u [polite prefix], cf. MdJ o [id] plus tëk) 'moon', and Sho -dĭki ~ tĭk- 'id'. We may have to consider the existence of a doublet for PA too; i.e., PA *tĭki ~ *tëki 'id'.

The forms for Sib, Sho and Ong in (193) require etymological analysis. The PA form for the identical words in Sib and Sho, k^{ʔ}jup, and Ong kkjubi, was probably k^{ʔ}i, which is the suspensive form of the verb 'to wear' (cf. PA

Chart 449. Modern reflexes for PA -*$i_{\emptyset}$ Pattern 10

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
9,17,193 236,245	Ø	Ø	i	i	i	i	i
28	-	Ø	i<L?>	-	i	i	-
(30)	ii ~ Ø	i ~ Ø	i	i	i<L?>	i	i
97	Ø	-	i	-	-	-	i
99,226	Ø	Ø	i	i	i	-	-
106	Ø	Ø	-	i	-	i	i
187	Ø	Ø	i	-	i	i	i<L?>
191	Ø	Ø	-	i<L>	i	i	i
194b	Ø	Ø	i	i	i	-	i
196	-	Ø	i	i	i	i	i
237	Ø	-	i	i	i	-	i<L?>
(7),(29)	Ø ~ i	Ø	i	i	i	i	i
(118)	-	-	i	i	i	i	i
(176b)	Ø	i	-	i<L>	i	i	i
(186)	Ø	-	i	i	-	-	o ~ u

k$^{\text{ʔ}}$ir 180), plus ubi (cf. ubi in Nas and Yoa in (193)). Thus the development of this compound word would have been as follows (for *-b- > Sib and Sho -p, refer to 4.3.4.2.):

PA *k$^{\text{ʔ}}$i + *ubi > *k$^{\text{ʔ}}$jubi > Ong **kkjubi**

Sib has Ø ~ i in (7,29). I presume the doublet with /i/ is borrowed, cf. toki 'time' (7), and kami 'god'

(29), cf. duk ~ toki 'id' and kam ~ kami 'id' respectively.

Also, despite the slight semantic gap between the San and MdJ words, San (186) agu ~ ago 'upper jaw' may be from MdJ ago 'lower jaw'.

In complementary distribution with Chart 449, we find the pattern where Nas has /ɨ/ in the environment *ʃ, *tʃ, *ʒ_. We ascribe this pattern to i_{β}.

Chart 450. Modern reflexes for PA *i_{β} Pattern 11

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
124b,146, 232,252	ø	ø	i	ɨ	i	i	i
(4)	ø	ø~i	i	i	i	i	i
(60)	i	ø	i	ɨ	-	-	i
(87)	ø	ø	-	i	i	i<L>	i
(205)	ø	ø	i	i	i	i	-

In (4), (87), and (205), Nas has /i/ instead of /ɨ/ in the environment *ʃ_. These are exceptions to Pattern 9. For this apparently irregular /i/, refer to 4.3.9.2, where Nas irregular /ʃ/ is discussed.

Sib /i/ in (60) and Sho doublet with /i/ in (4) are exceptions to Pattern 11.

Note that with only three examples for Pattern 9 (Chart 448) we do not see any examples of Nas/ɨ/ in the environment *ʒ_, but we suggest that should this environment occur, Nas would have /ɨ/.

4.4.1.3.3 Pattern 12

This correspondence pattern is observed when the immediately preceding segment is from PA *u, and as such it is in complementary distribution with Patterns 8, 9, 10, and 11. We thus also ascribe Pattern 10 to PA *-i.

Chart 451. Modern reflexes for PA -*i Pattern 12

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
14b	ttʃui	tʃii	tʃui	ttʃui	-	tʃii	tʃii
	i	i	i	i		i	i
101	kui	kui	kui	kui	kui	kui	hui
	i	i	i	i	i	i	i
178	wui	ui	wui	wui	wui	woi	wui
	i	i	i	i	i	i	i

4.4.1.4 Sound changes for PA *i

We find the following sound changes for PA *i:

PA $*i_{A.B}$ > j / _m in San
> ɪ / ʃ,tʃ,ʒ_ in Nas
$*i_B$ > ø / C_≠ in Sib, Sho
> i elsewhere

Note that *i > j / _m is preceded by the dropping of *m, which consequently produced a vowel sequence.

I realize that the present solution is perhaps subject to other interpretation, particularly with regard to *i > ɪ, but I present the above as the most likely solution.

4.4.2 PA *a

4.4.2.1 Pattern 1

We find a correspondence series consisting of /a/ throughout, again showing an arbitrary occurrence of /aa/ in Sib and Sho (Chart 452). From the numerous examples, we reconstruct *a for PA.

Chart 452. Modern reflexes for PA *a

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
			*a-				
230a, 258	a	a	a	a	a	a	a
72	a	-	a	a	a	a	a
182	a	-	a	a	a	a	a
186	a	-	a	a	a	a	a
220	a<L>	a<L>	a	a	a	a	-

*-a-

11a,29,40,41, 42,50,53, 75,84a, 201,226,245, 252,259, 261	a	a	a	a	a	a	a
28	-	a	a<L>	a	a	a	a
35	a	a	a	a	a	a<L>	a
67a,b	a	a	-	-	-	a	-
73	a	a	-	-	a	a	a<L>
74	a	-	a	a	a	a	a
76	a	a	a	-	a	a	a
85	a	a	a<L>	a	a	a	a
106	a	a	a	-	a	a	a
113a	a	-	a	a	-	-	-
127a,b	a	-	a	a	a	a	-
163	a	a	a	-	-	a	-
169	a	a	a	a	a	-	a
191	a	a	-	a<L>	a	a	a
196	-	a	a	a	a	a	a
(198)	-	-	a	a	a	aa	a
215	a	a	-	a	-	-	-
222	a	-	a	a	-	a	a<L?>
223	a	a	a	-	-	-	-
255a	a	a	-	-	-	a	-
(143)	a	aa	-	a	a	a	a

	*-a						
11b,68,84b,157, 214,225,246, 249,251,	a	a	a	a	a	a	a
66	aa	aa	a	a	a	a	a
67c	a	aa	-	-	-	a	-
71	aa	aa	-	a<L>	a<L?>	a	a
95	a	a	a	-	a	-	-
113	aa	-	a	a	-	-	-
(161)	ë	a	a	a	a	a	a
162	aa	a	a	a	a	a	-
216	a	a	-	a	-	a	a
217	a	a	-	a	-	-	-
230	a	a ~ aa	-	a	-	a	a
247	a	a	a	a	a	-	a
250	a	a	a	a	a	a	-
254	a	-	-	a	a	-	a<L?>
255b	a	a	a	a	-	a	a
83(SF)	a	a	a	-	a	-	a

The occurrence of /ë/ in Shi (161) is an exception, possibly caused by the /ë/ in the suffix (cf. Shi (161) nëg(ë). Sho /aa/ in (143) and Yoa /aa/ in (198) are exceptions.

4.4.2.2 Sound changes for PA *a.

PA *a is retained as /a/ in all dialects.

4.4.3 PA *u (*u_A and *u_B)

4.4.3.1 Pattern 1

We find a correspondence series consisting of /u/ throughout with /uu/ occasionally occurring word-finally in Sib and Sho and more rarely in Ong, Nas and San (Pattern 1). From the numerous examples we reconstruct *u for PA.

Chart 453. Modern reflexes for PA *u Pattern 1

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
			*u-				
114a,116 183	u	u	u	u	u	u	u
28	-	u	u<L?>	u	u	u	u
115a	-	u	u	u	u	u	u
(228a)	u	-u	i	u	u	u	u
247	u	u	u	u	u	-	u
			*-u-				
12a,17a,17b, 31,68a,b,88, 101,108,110a, 118a,b,148a, 225a,b,238a, 241,248	u	u	u	u	u	u	u
(14a)	u	i	u	u	-	i	i
15b	-	u	u	u	-	-	u
18	u	-	u	u	u	u	u
(65)	-	-	u	u	-	i	u

67	u	u	-	-	-	u	-
83	u	u	u	-	u	-	u
87a	u	u	-	u	u	u	u
89a	u	-	u	-	u	-	u
95a,b	u	u	u	-	u	-	-
100a	u	u	u	u	-	u	u
102a,b,c	u	-	u	u	u	u	u
113	u	u	u	u	-	-	-
114b	u	uu	u	u	u	u	uu
115b	-	uu	u	u	u	u	u
127	u	-	u	u	u	u	u
129b	-	u	u	u	-	u	u
134	-	u	-	u	-	u	u
152a	-	-	u	-	u	u	u
(146)	u	u	u	i	u	u	u
(204a)	u	u	i	u	u	u	u
200	-	u	u	u	-	u	u
216	u	u	-	u	-	u	u
242	-	u	u	u	u	u	u
250	u	u	u	u	u	u	-
254	u	-	-	u	u	-	u
(15a)	-	u	u	u	-	-	uu

*-u

21(SF), 110b, 128(SF)	u	u	u	u	u	u	u
10	u~uu	uu	u	uu	u	u	u

12	u	uu	u	u	u	u	u
20	uu	uu	u	-	u	u	u
89b	u	-	u	-	u	-	u
107	u	u	u	u	-	-	u
114c	uu	u	u	u	u	u	u
132	-	-	u	u	-	-	u
140	u	u	u	u	u	-	-
152b	-	-	u	-	u	u	u
(204b)	u	u	u	u	u	Ø	u
228b	u	uu	u	u	uu	u	u~uu
231	u	u	u	uu	u	u	u
239	u	u	u	u	u	-	-
240	uu	-	u	uu	u	-	u
243	-	uu	u	u	u	u	u
244	-	-	-	-	u	u	uu

Sho /-u/ in (228a) shows that here Sho has acquired a word-initial /h/. Ong /i/ in the same item is an exception due to a word-initial /w/.

For (14a) see Chart 451 in 4.4.1.3.3.

The /ĭ/ in Yoa (65) is an exception, possibly due to assimilation from the /ĭ/ found in the preceding syllable.

Ong /ĭ/ in (204a) is an exception, probably caused by the immediately preceding /k/, where the other dialects show /kj/ (cf. 4.3.15.2).

The Ø in Yoa (204b) is an exception.

The sporadic occurrence word-medially of /uu/ is

unexplainable and must be considered an exception, unless we again fall back on the possibility previously mentioned of analogy with word-final occurrence.

4.4.3.2 Pattern 2

In the PA environment _Ca, Ong has /o/, or /o/ and /u/ in the case of doublets. Note that due to the constraints of its environment, Pattern 2 does not occur word-finally.

Chart 454. Modern reflexes for PA *u-, *-u- Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
84,246, 251	u	u	o	u	u	u	u
245	u	u	o~u	u	u	u	u
(161)	u	u	o	o	u	u	u
162	u	u	u~o	u	u	u	-
(201)	u	u	o~u	u	u	o	u
(214)	u	u	o~u	u	o	u	u
(215)	u	u	-	u	-	-	-
(250)	u	u	u	u	u	u	u
(252)	u	o	o	u	u	u	u

It may be the influence of the Ong /o/ causing the sporadic appearance of /o/ in the neighbouring dialects of Nas and Sho. Note that we can not suspect the influence of MdJ in these cases. Observe the following correspondences: (161) Ong noga(u) 'to wipe', Nas noga(i) 'id', and MdJ nugu(u) 'id'; (252) Ong mokaʃi 'ancient time', Sho mokaʃ 'id', and MdJ mukaʃi 'id'.

We can infer that Ong would have /o/ in (215) from its PA environment (_ra), and so list this correspondences in Chart 463.

Yoa /o/ in (201) onagu 'female child' may be caused by MdJ; cf. Kyushu dialect onago 'id'. Observe that the PA initial segment *w is absent only in this Yoa word.

For Yen /o/ in (214) oja 'parent', refer to 4.4.3.3.

Ong /u/ in (250) is an exception.

4.4.3.3 Pattern 3

Yen and Yoa (and, in isolated cases, Sib, Sho and San), sometimes show /o/, /oo/, and /U/ when the other dialects have /u/ (Pattern 3). Note again the familiar occurrence of long vowels word-finally in Sib and Sho. We ascribe this pattern to PA *u for the following reasons.

Because the observation of this 'irregular' /o/ is confined to instances where the MdJ correspondence is /o/, I assume it is caused by lexical borrowing from MdJ.

For example: (193) Yen obi 'J. belt' and MdJ obi 'id'; (7) Yoa toki 'time' and MdJ toki 'id'; (148b) Yen k$^{?}$uro

Chart 455. Modern reflexes for PA *u Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
				*u-			
193	u	u	u	u	o	u	o
				*-u-			
4	U	u	u	u	o	u	u
7	u~o	u	u	u	u	o	u
19	u	u	u	u	o	-	u
23	u	u	u	u	o	u	u
71	u	u	u	-	u<L>	o<L?>	u
79a,b	u	u	u	u	o	u~o	u
91	u	u	u	u	u	U	u
111a	o	-	u	u	o<L?>	u	u
111b	o	-	u	Ø~u	o<L?>	u	u
117a	u	u	u	u	o<L?>	-	u
123	u	u	u	u	U	u	u
126	u	o	u	u	u	u	u
133	U	-	u	-	-	u	-
135	u	U	u	u	-	u	u
136a,b	-	U	u	u	u	u	u
178	u	u	u	u	u	o	u
226	u	u	u	u	u	o	o

236	u	oo	u	u	u	U	u
237	u	-	u	u	o	-	u
				*-u			
116	UU	u	u	u	u	u	u
117b	u	u	u	u	o<L?>	-	u
138	u	oo	u	u	u	u	u
169b	u	u	u	u	o	-	u
148b	u	u	u	u	o	o	u
238b	u	o	u	u	u	u	u

'black', Yoa kkuro 'id', and MdJ kuro 'id', etc. This occurrence of /o/ in Yen and Yoa may be quite specific to the individual informants. As noted in 1.2.2.3, the Yen informant had worked in Kobe Japan for six years, and the Yoa informant considered himself to be a highly educated man. Note the high incidence of <L?> marks in Yen and Yoa in this pattern.

Observe that in (148b) the Yen and Yoa words are k$^{?}$uro 'black' and kkuro 'id' respectively. The vocalism for both these words is in the pattern of u-o. These are the only cases which violate the vocalism constraint of MdA (FN.6). Because of the resemblance of the shape and

Footnote 6. Cf. 3.3.2 viz. /u/ and /o/ cannot co-occur in the same word.

vocalism of these two words and MdJ kumo 'id', we are able to attribute the /o/ in Yen and Yoa to lexical borrowing.

It is possible that the /o/ in Sho (238b) may also be caused by lexical borrowing; cf. Sho k'umo 'spider', kubu 'id' in the other dialects, and MdJ kumo 'id'.

4.4.3.4 Pattern 4 and 5 ($*u_A$ and u_B)

In the Nas environment of _Cï, we find ten tokens of a correspondence series consisting of /ï/ in Nas and /u/ in the other dialects (Pattern 4). Obviously this pattern can be considered the result of a regressive vowel assimilation.

In this same environment, however, we also find six tokens of a correspondence with /u/ throughout (shown in Pattern 5). We find no environmental differences for the occurrence of the two Nas reflexes. Observe here the types of consonants appearing in the C positions of the environment C_Cï:

When Nas has /ɨ/		When Nas has /u/	
43	k m		
60	b s	8	t s
92	k z	56	w h
112	t m	90	k r
125	m ts	141	k s
147	t gj	209	j b
232	h s	235	m ts
233	h n		
105a	t k		
146	t z		

We must consider the possibility of ascribing Patterns 4 and 5 to different PA segments, one of which is *u as so far reconstructed. However, we do not know which pattern goes back to *u. In this case, I propose, provisionally at least to set up $*u_A$ and $*u_B$ for Patterns 4 and 5 respectively (FN. 7).

Yen rarely has doublets in this environment, which means the appearance of /ɨ/ is an exception. In Chart 465, for instance, we find (112) Yen tumɨ(re) ~ tɨmɨ(ri) 'to stop' (cf. also (141) below and (145) in our master list). We will classify both Yen (112) and (141) as exceptions.

Footnote 7. The naming of 'A' and 'B' is arbitrary.

Chart 456. Modern reflexes for PA *-u_A- Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
60,92a, 125,147, 232,233	u	u	u	ĩ	u	u	u
43	u	u	-	ĩ	u	-	u
(105a)	u	uu	u	ĩ	o	-	u
92b	uu	uu	u	ĩ	u	u	u
(112)	-	u	u	ĩ	u~ĩ	-	-

For /uu/ in Sho (105a) and in Sib and Sho (92b) and(146), see 4.4.3.6. Yor Yen /o/ in (105a), see 4.4.3.3.

Chart 457. Modern reflexes for PA *-u_B- Pattern 5

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
235	u	u	u	u	u	u	u
56	u	u	u	u	u	u	-
209	u	-	u	u	u	u	u
(8)	u	u	u	u	-	o	u
(90)	-	uu	u	u	u	u	u
(141)	u	u	u	u	u~ĩ	-	u

For the /o/ in Yoa in (8), refer back to 4.4.3.3, where we argued that certain /o/'s are caused by lexical

borrowing from Japanese.

For Yen /u/ ~ /ɨ/ in (141), and /ɨ in (168a), refer to our discussion on Yen (112) earlier in this subsection.

4.4.3.5 Pattern 6

We find four tokens of a correspondence consisting of /uu/ in Sib and/or Sho and /u/ in the other dialects (Pattern 6) in word-medial position, when the environment in Sib and Sho is C_C≠, which is from PA *C_Ci.

Note that, in fact, we have three more lexical items (90, 105a, 146) substantiating the occurrence of word-medial /uu/ in Sib and/or Sho. These items are dealt with in Chart 456 (105a, 146) and Chart 457 (90) because they are ascribable to *-u_A- and *-u_B- respectively.

Therefore, in discussing the relevant complementarity we must also take into consideration the environments found for these three items.

In the relevant environment (*C_Ci) we also find the correspondence consisting of /u/ in Sib and Sho, and also /u/ throughout in the other dialects (found in Pattern 1 in this case), and isolated /o/ ascribable to lexical borrowing (Pattern 3).

However, we observe the following difference in the *C of *C_Ci between the consonants found in the

environment for Pattern 6 and the others. That is, we find k$^{\text{ʔ}}$, k, g, and t for Pattern 6, and m, d, and b for the other patterns. For instance:

	Sib	Sho	Ong	Nas	Yen	Yoa	San
187	k$^{\text{ʔ}}$uuk	k$^{\text{ʔ}}$uuk	u	-	u	u	u<L?>
9	tuur	tur	u	u	u	o	u
			vs.				
226	mabur	mabur ~ nabur	u	u	u	o	o
17b	wudur	wudur	u	u	u	u	u

Based upon the above observation, we ascribe Pattern 6 to *u.

Chart 458. Modern reflexes for PA *-u- Pattern 6

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
9	uu	u	u	u	u	o	u
87b	u	uu	-	u	u	u<L>	u
99	u	uu	u	ĩ	u	-	-
106	uu	u	u	u	-	u	u
187	uu	uu	u	-	u	u	u<L?>

Yoa /o/ in (9) is perhaps due to lexical borrowing from MdJ tori 'bird'; cf. Yoa tori 'id' (4.4.3.3). Nas /ĩ/ in (99) is an exception.

4.4.3.6 Pattern 7

In this subsection I will discuss the tokens of the remaining recoverable correspondence series of PA *u. We find five items showing a correspondence in word-final position with Ø in Sib and Sho, and /u/ in the other dialects (with irregular reflexes in Nas for (105b).

We can posit that the historical process at work here is one in which PA *-u has dropped off in Sib and Sho. One possible explanation is that the loss of *-u is by analogy of the word-final *i loss in Sib and Sho (cf. 4.4.1.3.2), which is substantiated by many lexical items. Note that there is no specific environment for the occurrence of this pattern. PA *-u is otherwise retained as /u/ in all other lexical items (cf. Pattern 1, Chart 453). We therefore treat Pattern 7 as an exception to Pattern 1.

Chart 459. Modern reflexes for PA *-u Pattern 7

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
85	Ø	u	u<L>	o	u	u	u
105b	Ø	Ø	u	i	o	-	u
143	Ø	Ø	-	u	u	u	u
(153)	Ø	u	u	u	u	u	u
201	Ø	Ø	u	u	u	u	u

For the occurrence of /o/ in (105b) Yen, refer to

4.4.3.3. Note that the Nas /i/ in (105b) is merely an exception, and unrelated to the argument presented in 4.4.3.5. Sho /u/'s in (85) and (153) are exceptions.

4.4.3.7 Sound changes for PA *u

We find the following sound changes for PA *u (Note that the case of $*u_A$ and $*u_B$ is by no means easily explainable, and Nase certainly requires further examination to define the relevance of these patterns.)

*u	>	o, or o and u / _Ca	in Ong
	>	i / _Ci	in Nas ($*u_A$)
	>	uu / C($k^?$,k,g,t)_Ci	in Sib and/or Sho
	>	u	elsewhere

4.4.4 PA *o

4.4.4.1 Pattern 1

We have over twenty tokens of a correspondence series of /o/ throughout with scattered exceptions /u/, /U/ and word-final /oo/ in all dialects except Yen and San. From these examples, we reconstruct *o for PA.

Ong /u/ in (166b) is an exception (cf. below for (166a) in Pattern 2, 4.4.4.2), as is Yen /a/ in (221a).

Chart 460. Modern reflexes for PA *o Pattern 1

No	Sib	Sho	Ong	Nas	Yen	Yoa	San
				*o-			
(131a)	u	u~o	-	o	-	-	
(149a)	-	o~u	o	o	o	o	o
(221a)	o	o	o	o	o	a	o
				*-o-			
155b,160b	o	o	o	o	o	o	o
149b	-	o	o	o	o	o	o
(220)	o<L>	o<L?>	u	o	o	o	-
				*-o			
155c, 221b	o	o	o	o	o	o	o
77	-	o	-	o	o	o	-
80	o	o	o	o	o	-	-
82	o	o	o	o	o	o	-
131b	o	o	-	-	o	-	-
150b	U	-	o	o	o	u	o
165c	o	o~oo	o	o	o	o	o
(166b)	o~oo	o	u	o	o	-	o<L?>
171	o	-	o	o	o	o	o<L?>
172b	o	-	u	u~o	o	o<L?>	-
211	o	o	o	o	o	-	o
222	u~o<L>	-	o	o	-	o	o<L?>
224	oo	oo	o~oo	o	o	o	o

4.4.4.2 Pattern 2

In the environment of ≠C_Co, however, Sib has /u/ instead of /o/, and Ong shows frequent /u/ as well (Pattern 2). We ascribe this pattern to PA *o.

Chart 461. Modern reflexes for PA *-o- Pattern 2

No	Sib	Sho	Ong	Nas	Yen	Yoa	San
164a, 165a	u	o	o	o	o	o	o
166a	u	o	u	o	o	-	o<L?>
167a	u	o	o	o	-	o	-
(172a)	u~oo	-	u~o	o	o<L?>	-	-
(78a)	U	u	o	o	o	o	o
155a	u	o	u	o	o	o	o

In (78a), /U/ appears in Sib instead of /u/. The /u/ in Sho (78a) is an exception.

4.4.4.3 Pattern 3

We find a correspondence series consisting of /oo/ in Sib and /o/ in the other dialects (Pattern 3). This pattern is, however, confined to the environment nj,m,t,d_≠; e.g. (78) mUmoo 'thigh', (72) atoo 'trace', (75) jadoo 'door', etc. When the environment has

consonants other than these four, Sib has /o/; e.g. 82 iʃo 'beach', etc. Therefore we shall ascribe Pattern 3 to PA *o.

Chart 462. Modern reflexes for PA *o Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
78b, 164b	oo	o	o	o	o	o	o
(22)	o~oo	o~oo	o	o	o	o	uu
72	oo	-	o	o	o	o	o
(76)	oo	o	o	-	u	o	o
(75)	oo	o	o	o	o	o	U
(73)	UU	o	-	-	o	o	o<L>
(74)	o<L>	-	o	o	o	o	U
(167b)	u	o	o	o	-	o	-

Sib has /UU/ in (73) instead of /oo/.

The /u/ in Yen (76) is an irregular reflex.

Lexical item (74) is listed in this chart although the reflex in the Sib slot is a loan. We assume it would be /oo/ if it were not a loan.

We find no explanation for the /U/'s and the /uu/ found in San (75, 74, 22).

Sib /u/ in (167a) is an exception to Pattern 3.

4.4.4.4 Sound changes for PA *o

We will postulate the following sound changes for PA *o:

*o	>	u / ≠C_Co	┐
	>	oo / nj,m,t,d_≠	├ in Sib (4.4.3.2)
	>	o	elsewhere (4.4.3.1)

4.4.5 PA *ɨ

We find a correspondence series for non-monosyllabic cases consisting of /ɨ/ throughout with once again a few instances of /ɨɨ/ word-finally in Sib and Sho (Pattern 1). From these examples, we reconstruct *ɨ.

San /u/ in (65) is an exception, possibly caused by either vowel assimilation from /u/ in the following syllable, or analogy with San /u/ described in 4.4.5.2 below.

Nas /e/ in (258) is an exception perhaps due to lexical borrowing from MdJ ase 'sweat', or Kyushu dialect aʃe 'id', or from both; cf. Nas ase ~ aʃe 'id'.

Yen /ɨɨ/ in (32) is also an exception.

Chart 463. Modern reflexes for PA *ɨ Pattern 1

No	Sib	Sho	Ong	Nas	Yen	Yoa	San
				*ɨ-			
				*-ɨ-			
13a,30, 48a,60	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ
6a	ɨ	-	ɨ	-	ɨ	ɨ	ɨ
(65)	-	-	ɨ	ɨ	-	ɨ	u
77	-	ɨ	-	ɨ	ɨ	ɨ	-
130a	ɨ	-	ɨ	ɨ	-	ɨ	ɨ
145	-	ɨ	ɨ	ɨ	ɨ	-	ɨ
(32)	ɨ	ɨ	ɨ	ɨ	ɨɨ	ɨ	ɨ
(157)	i	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ
				*-ɨ			
13b	Ø	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ
233	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ
(258)	ɨɨ	ɨɨ	ɨ	e	ɨ	ɨ	ɨ

4.4.5.2 Pattern 2

In the PA environment of *m_≠ however, we find /u/ in San instead of /ɨ/ together with loss of preceding *m. (Pattern 2). Therefore we can ascribe Pattern 2 also to PA *ɨ. Once again we find the characteristic lengthening of

the final vowel in Sho.

Sho Ø in (41) which makes a doublet with /ɨ/, - gam 'pot' ~ kamɨ, is an exception.

Yen /e/ in (53) may be due to lexical borrowing from MdJ; cf. Yen mame 'beans' and MdJ mame 'id'.

San /ë/ in (130) is an exception; although *m has been lost the word has taken the irregular shape of San (130) sɨëun. San /ɨ/ in (48b) is also an exception, caused by the exception of the retention of *m.

San /uu/ in (37) is perhaps a result of the assimilation of the two vowels on either side of *m, after *m had dropped off (cf. 4.3.12.)

Chart 464. Modern reflexes for PA *ɨ Pattern 2

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
37	ɨ	ɨɨ	ɨ	ɨ	ɨ	ɨ	uu
42	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ	u
43	ɨ	ɨ	-	ɨ	ɨ	-	u
(41)	ɨ	Ø~ɨ	ɨ	ɨ	ɨ	ɨ	u
48b	ɨ	ɨɨ	ɨ	ɨ	ɨ	ɨ	ɨ
(53)	ɨ	ɨ	ɨ	ɨ	e	ɨ	u
112	-	ɨ	ɨ	ɨ	ɨ	-	-
130	ɨ	ɨ	ɨ	ɨ	ɨ	ɨ	ë

4.4.5.3 Pattern 3

In the word-final position we find a correpondence series consisting of Ø or blank in Sib and Sho, and /ɨ/ in the other dialects.

Like Patterns 1 and 2, this pattern occurs in non-monosyllables, and is word-final. Note that here again, as with *i and *u, we find word-final vowels everywhere but Ø in Sib and Sho. However, as this pattern for /ɨ/ is observed after consonants (*r, *t, and *z) where neither Pattern 1 nor 2 appear, we shall ascribe Pattern 3 also to PA *ɨ.

Chart 465. Modern reflexes for PA *ɨ Pattern 3

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
203	Ø	Ø	ɨ	ɨ	ɨ	ɨ	ɨ
90,136	-	Ø	ɨ	ɨ	ɨ	ɨ	ɨ

4.4.5.4 Pattern 4 monosyllabic words

With monosyllables, we find a pattern with ɨ throughout, with Sib and Sho once again showing this time frequent long vowels. We ascribe Pattern 4 to PA *ɨ.

Chart 466. Modern reflexes for PA *i Pattern 4

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San
25	ii	i	i	i	i	i	i
62	i	ii	i	i	i	i	i
57	ii	ii	i	i	-	i	-
(58)	i	ii	i	i	e	-	-
(63)	-	-	i	i	i	i	i

Yen /e/ in (58) is irregular. I presume that it is caused by lexical borrowing from the Kagoshima dialect.

Sib and Sho have blanks in (63). However, we can predict that the reflexes would be /ii/ in either or both since (63) is monosyllabic; cf. mi 'bud' in all the other dialects.

4.4.5.5 Sound changes for PA *i

We have obtained the following sound changes for PA *i.

*i	>	u / m_≠	in San (4.4.5.2)
	>	ø / r,t,z_≠	In Sib,Sho (4.4.5.3)
	>	i	elsewhere

As we shall see in the following section, there is

reasonable evidence for *ɨ being lowered in certain environments, especi/lly -*h- and *VV.

4.4.6 PA *ë - an allophone of *ɨ

4.4.6.1 The unpredictable patterning of reflexes

We find eight similar tokens in which /ë/ patterns with /e/, and or /ɨ/, with the familiar long vowel word-finally in Shi and Sho. However, we cannot predict where these different reflexes will appear, except in a few inconclusive situations (e.g. in the PA environment of _h_, San has /e/ where Ong and Nas have /ë/).

San /o/ in (189) may be a progressive assimilation caused by the preceding /o/.

Yoa /u/ in (56) may also be assimilation caused by the other /u/ (cf. Yoa uhu 'pail' and PA *wuhë 'id').

The occurrence of Ø word-medially in (205b) is an exception.

The occurrences of Ø word-finally in Chart 467 are related to the shortening of *ëë.

4.4.6.2 The allophonic nature of ë

Observe the relevant PA environments given for each correspondence in Chart 467. These environments for

Chart 467. Modern reflexes for PA *ë

No.	Sib	Sho	Ong	Nas	Yen	Yoa	San	Envir.
				*ë-				
				*-ë-				
45a	ë	ë	ë	ë	ë	ë	ë	_*hë
64	ë	-	ë	ĩ	ë	-	-	*m_
44a	ĩ	e	ë	ë	ĩ	ĩ	e	_*hë
46a	ë	ĩ	ë	ë	-	-	e	_*hë
184	ë	ĩ	-	-	-	-	e	*s_
205a	ë	ë	ë	ë	ë	ë	-	*_ë
205b	ë	ë	ë	ë	ø	ë	-	*ë_
207a	ĩ	ë	ë	ë	ë	ë	ĩ	*_ë
210a	-	ë	ĩ	ĩ	ĩ	-	ĩ	*_ë
				*-ë				
40	ëë	ëë	ĩ	ë	ë	ë	ë	*g_≠
44b	ë	-	ë	ë	e	e	e	*ëh_≠
45b	ëë	ëë	ë	ë	ë	ë	ë	*ëh_≠
46b	ëë	ëë	ë	ë	-	-	e	*ëh_≠
50	ëë	ĩĩ	ĩ	ĩ	ë	ĩ	ĩ	*b_≠
70	ëë	ĩ	ĩ	e	e	e	e	*n_≠
(189)	ë	ë	e	ë	ë	ë	o	*IRC_≠
(56)	ĩ	ĩ	ĩ	ĩ	ë	u	-	*h_≠
207b	ë	ë	ø	ø	ë	ø	ø	*ë_≠
209	ë	-	ĩ	ĩ	ë	ĩ	ĩ	b_≠
210b	-	ø	ĩ	ø	ë	-	ø	*ë_≠

PA *ë can be summarized as follows:

_*h_	7 tokens
*ë_ or _*ë	6 tokens
*g_,*b_,*m_,*s_,*n_	1 token each
*IRCV_	1 token

The environments for PA *ĩ are:

*m_	11 tokens	*t^{ʔ}_	3 tokens
*ts_	4 tokens	*n_	2 tokens
*k_	4 tokens	*s_	2 tokens
*p_, *k^{ʔ}_, *r_	1 token each		

Consider that all six *m_ tokens relative to *ĩ are word-final cases, whereas the only case relative to *ë is found to be in the morpheme-final position of the first element of the compound word më(nga) (FN.8).

The *s in (184), and (70) *n are exceptions.

Although there is some inconsistent overlapping of environments, it is clear that *ë tends to appear in conjuction with with *h and *VV, and *ĩ elsewhere.

Based upon the environmental differences observed between *ĩ and *ë, we tentatively propose to treat *ë as an allophone of *ĩ.

Footnote 8. The (nga) is not taken into account for the purposes of our reconstruction.

4.5 Synchronic description of PA

We recognize 19 consonants plus 5 more tentative consonants (given in parenthesis) for PA (Figures 402 and 403 below). We find five vowels for PA (Figures 404 and 405 below). The existence of u_A and u_B within u is recognized in the Nas environment /_Cï/. We find a sixth vowel *ë, perhaps an allophone of *ï. Allophone *ë occurs mainly in environments *ëh_, _*hë, *VV, and also *g,*n,*m,*s,*b_. We find that *i has two forms, which we call $*i_A$ and $*i_B$.Since, for the purposes of this work, $*i_A$ and $*i_B$ behave in the same way, we will treat them for now as one vowel, *i. The distinction of $*i_B$ is recognized only in word-final position.

PA has CVCV construction, with occasional VV combinations. We find that *o and *u do not co-occur in the same word. The vowel *o occurs only in the shape of *CoCo, or word-finally, or monosyllabically.

We find *n as the only final consonant. We find that *k has allophone *h in word-initial position. Also *t has allophone *ts in the environment _*ï. PA *k$^{?}$ occurs word-initially, allophone *kk occurring word-medially.

Figure 402. PA consonants

	Bilabial	Alveolar	Palato-alveolar	Palatal	Velar	Labio-velar
Plosive:						
Voiceless stop	*p	*t			*k	(*kkw)
Voiced stop	*b	*d			*g	
Glottalized stop		(*t^{ʔ})			*k^{ʔ}	
Affricate		*ts		*tʃ		
Fricative		*s	*ʃ	*j		*w
Glottalized fricative				(*j^{ʔ})		*h
Voiced fricative		*z	*ʒ			
Tap		*r		(*rj)		
Nasal	*m	*n		(*nj)		

Figure 403. Occurrence of PA consonants

	*p	*t	*k	(*kkw)	*b	*d	*g	(*t^{ʔ})	*k^{ʔ}	*ts	*tʃ	*s
Word-initial	o	o	o	o				o	o	o	o	o
Word-medial		o	o		o	o	o		o	o	o	o
Word-final												

	*ʃ	*j	(*j^{ʔ})	*w	*h	*z	*ʒ	*r	(*rj)	*m	*n	(*nj)
Word-initial	o	o	o	o	o					o	o	o
Word-medial	o			o	o	o	o	o	o	o	o	o
Word-final											o	

Figure 404. PA vowels

High	i	ɨ	u
Mid		(ə)	o
Low		a	

Figure 405. Occurrence of PA vowels

	$*i_A$	$*i_B$	*a	$*u(u_A, u_B)$	*o	*ɨ
Word-initial	o		o	o	o	
Word-medial	o		o	o	o	o
Word-final	o	o	o	o	o	o

4.6. Sound changes

In this section we summarize the sound changes obtained through our reconstruction. We have included all sound changes listed in 4.3 and 4.4 (including those more tentative changes) combining findings wherever possible.

In the next two subsections we have separated our findings into those sound changes shared by two or more dialec ts, and those specific to an individual dialect.

4.6.1 Shared sound changes

1. *i > Ø / C_≠
2. *ɨ > Ø / r,t,z_≠

3. *b, *z *ʒ > p, t, tʃ / _i≠
   *g > k / _i,u≠
4. *w > Ø / _a
5. *u > uu / C(kˀ,k,g,t)_Ci
6. *ts > t or tˀ
7. *z > d / _u
   > t / _ĩ

in Shi, Sho

8. *p > h — in Sib,Sho,Ong,Nas,Yen,Yoa

4.6.2 Changes specific to individual dialects

9. *o > u / ≠C_Co
10. *o > oo / nj, m,t,d_≠

in Sib

11. *p > F / _u
12. *u > o, or o and u / _Ca

in Ong

13. *ʃ, *ʒ, *tʃ > s, z, ts / _i≠
14. *i > ĩ / ʃ,tʃ,ʒ_
15. *u (*u) > ĩ / _Cĩ

in Nas

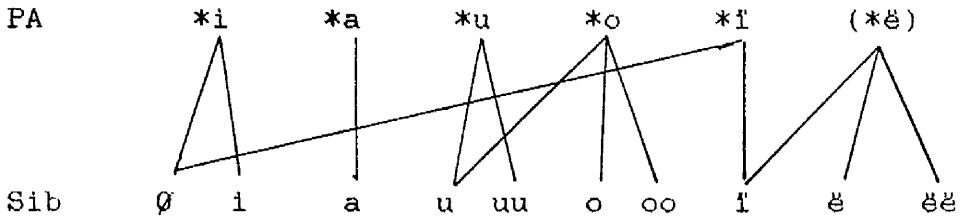
16. *k > h / ≠_aCĩ
    / ≠_ĩ
    / ≠_u
17. *i > j /_m
18. *ĩ > u / m_≠
19. *m > Ø / V_V

in San

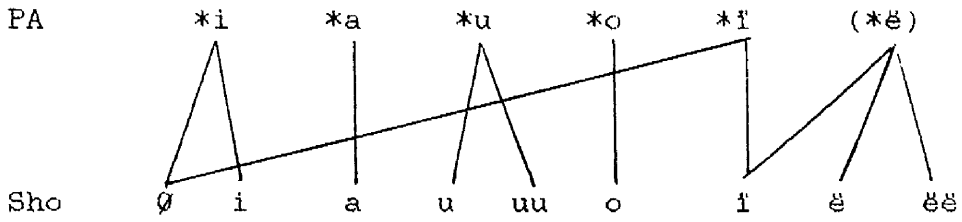
4.7 Development of PA vowels to individual MdAm dialects

Based upon the results from our reconstruction of PA, and the formulation of sound changes, I would like to present in this section, in diagram form, the development of our PA vowels to the individual Modern Amami dialects (concentrating exclusively on vowels as our main concern).

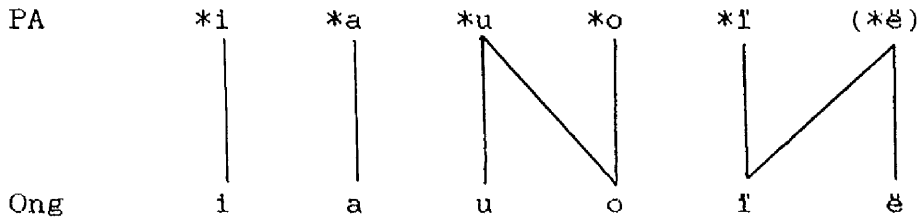
PA and Sib



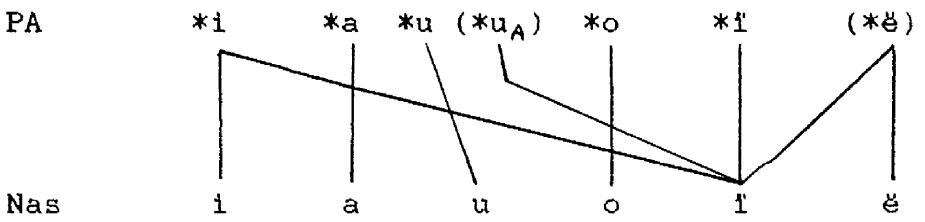
PA and Sho



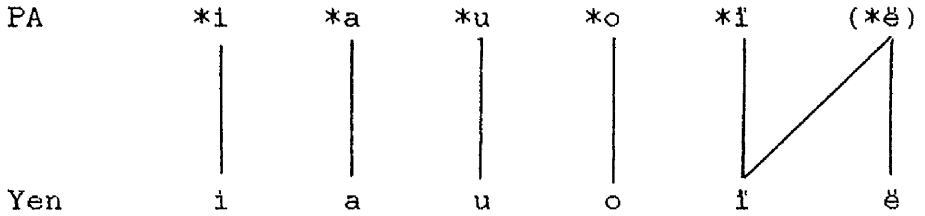
PA and Ong



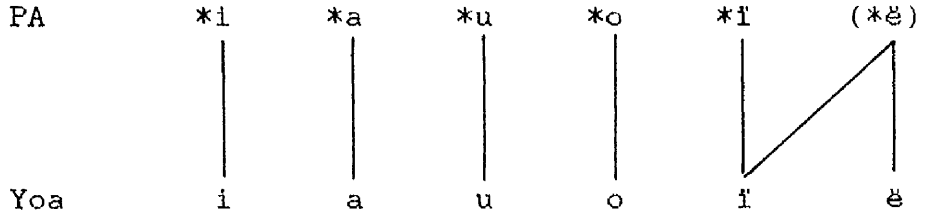
PA and Nas



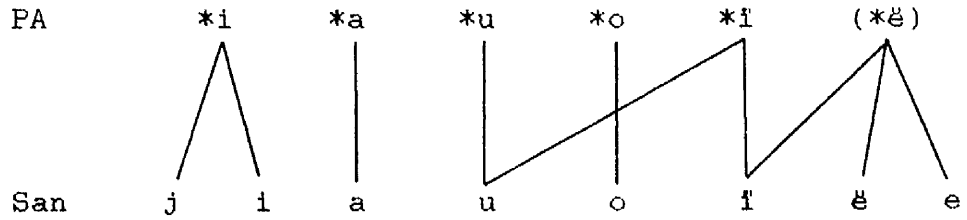
PA and Yen



PA and Yoa



PA and San



Chapter Five

SUB-GROUPING OF THE AMAMI DIALECTS

5.1 Criteria for sub-grouping

The purpose of this section is to attempt a sub-grouping of the seven dialects, and to thus set up any possible sub-proto-languages. How many sub-groups will be set up completely depends upon the number and situation of any shared sound changes found in our data.

It is perhaps inevitable that our data will not provide us with enough evidence to identify each and every sound change actually implemented since Proto-Amami split into its daughter languages. However, any currently irrecoverable sound changes, when they are found, should, ideally, merely make the sub-groupings we present here more detailed. If done correctly they should not contradict it.

If there is any contradiction, i.e. if two dialects classified into different sub-groups based on our established criteria are found to share a common sound change, we must reconsider our classification.

Needless to say, the establishment of the criteria is based upon the principle of descriptive economy. If two of our modern dialects share a common sound change which the others do not, we assume that the two must have come from the same sub-proto-language, unless

the sharing of the sound change can be shown to be coincidental (in fact, Sho and Ong share such a sound change, not included in our list of shared sound changes because of its coincidental nature, as detailed below).

5.2 Sub-grouping of the dialects

It will have been noticed already, from having observed the reconstructive work in the previous chapters, that Sib and Sho show frequent striking phonological similarities resulting from the many sound changes which they underwent in common. Such similarity is seldom found in the other dialects. With minor distinguishing characteristics peculiar to Sib involving *o in specific environments, Sib and Sho are in fact one dialect.

Refer to our list of Shared Sound Changes in 4.5 for those sound changes shared by Sib and Sho. These sound changes are sufficiently convincing to allocate Sib and Sho to a sub-group of their own, and, hence, to recognize the existence of Proto-Sib-Sho (Proto-SS).

Just as we could not help but observe in our data the similarities between Sib and Sho, we note the distinctive individual characteristics of San (4.5). It shares no sound changes with any of the other dialects, while displaying several sound changes of its own. We can conclude from this that San split off from the other dialects at a very early stage.

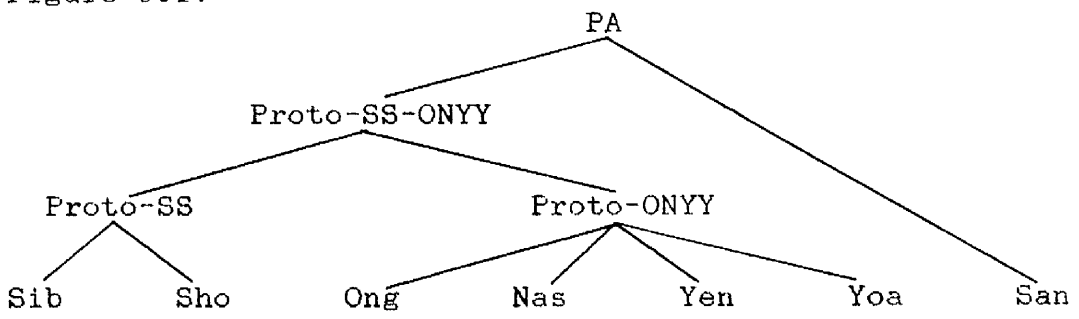
The remaining four dialects exhibit considerably fewer distinguishing characteristics, either individually or in combination. Ong has two sound changes unique to it, while Nas has a series of unique sound changes all related to /i/ and /ɨ/, and Yen and Yoa have no unshared sound changes. However, we do find one significant case where these four dialects share in a common sound change:

PA *p > h

Thus another sub-proto-language, Proto-ONYY is established. The sound change PA *p > h is, however, also shared by Sib and Sho, which have already been allocated a sub-group of their own on other grounds. We therefore postulate the existence of another sub-proto-language from which Proto-SS and Proto-ONYY derived, i.e. Proto SS-ONYY.

Let us now see, in the following figure, what we have obtained from the above observations:

Figure 501.



With the exception of the classification of Sib and Sho, which depends upon more than one shared sound

change, and quite specific evidence for San, this sub-grouping relies solely upon the sound changes formulated for *p (> p in San, > h in the other dialects).

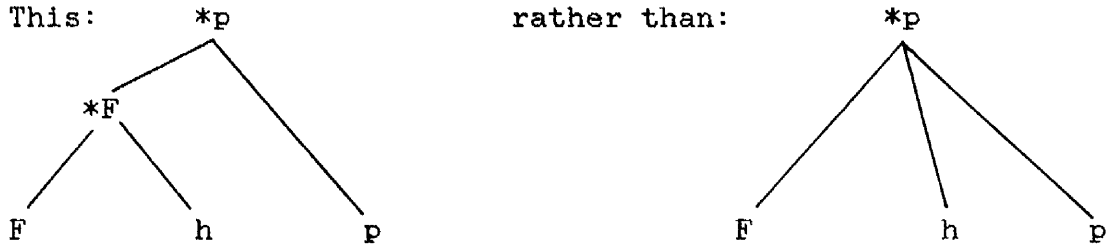
The possibility, however, that a sound change such as p > h should have occurred independently in the daughter dialects after they had split off from the mother dialect would seem most unlikely.

As far as our data is concerned, we do not find any other sound changes that can contribute to the establishing of further sub-groupings. Nor do we find anything to reinforce or contradict our conclusions in Figure 501. There is, in fact, a sound change not listed in our shared sound changes: *p > F / _a shared by Sho and Ong can reasonably be put to coincidence, since it represents a phonemically quite plausible vestige of the earlier shared sound change which took place when both dialects were joined in Proto-SS-ONYY.

However, coming back to the case of *p, we find another sound change wherein *p branched off into Sib hw and Sho and Ong /F/ in certain environments (cf. 4.3.1).

This change supports the mapping in Figure 501 by providing evidence for an intermediate stage *F. Assuming two successive stages of development, the historical linguist might want to draw a diachronic development of *p to F, and F to h and p, as in Figure 502.

Figure 502.



For a comparison of p > F > h, see Lass (1978).

Observe that our Figure 502 and Lass's are identical in terms of logic. What the *F as a 'natural intermediate stage' (Lass 1978, p. 250f) between *p and h denotes is the necessity of inferring the existence of Proto-SS-ONYY.

This diagram, however, is constructed on the basis of rather limited evidence, as we have seen. However, this historical model best reflects the possible progress of the phonomic changes of the Modern Amami dialects.

5.3 Isoglosses

We can illustrate our sound changes from 4.5 with isoglosses in Figure 503 below.

As noted in Chapter One, we chose our dialects to represent the entire geographical area of Amami, with each point of collection to be as far apart from the others as possible. As noted in the previous subsection, Sib and Sho appear to be basically the same dialect, while Ong, Nas and

San each show distinctive characteristics. Yen and Yoa are also very similar, but are excluded from classification with any one of the other dialects because they do not share distinctive sound changes.

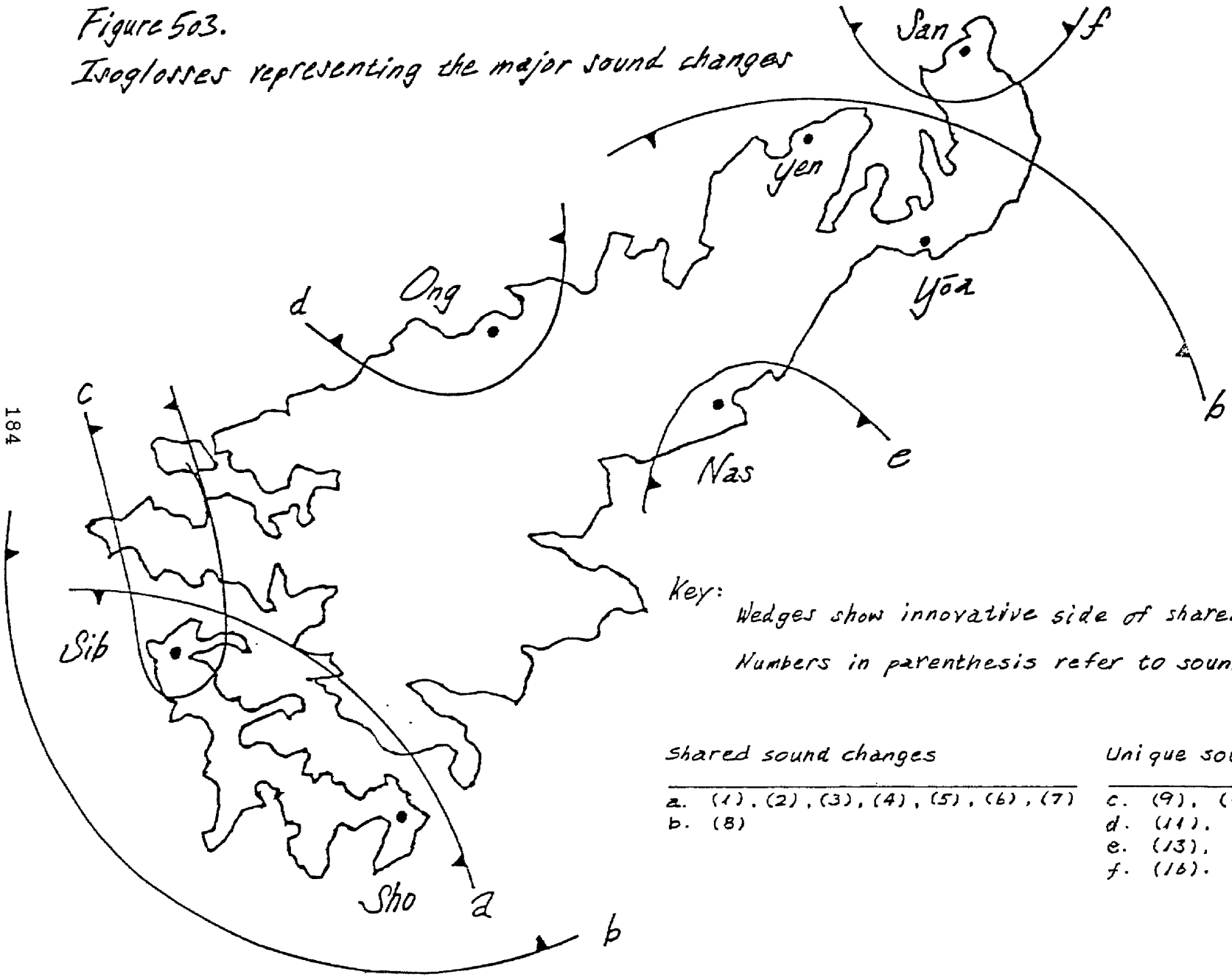
Geographically, our towns and villages are all coastal, isolated by both water and rugged terrain behind.

Sani is located at the north-easternmost point of the main island (cf. Map 1; 3.1). Furthermore, it was not until quite recently that Sani was connected by inland roads to our other locations. Previously the vast majority of travel to and from Sani was conducted along the coast by water.

It is understandable that San, due to its isolation, has been, as we have seen, conservative, going through sound changes unique to it and which differentiate it from the other four dialects spoken on the main island.

Both Siba and Shodon, on the other hand, are located on Kakeroma Island, a long thin rectangular island lying parallel to and facing the southernmost edge of the main island of Amami (see map again). In the absence of any bridges, travel is necessarily still, as it has always been, by water. It is not surprising that these two dialects share five such distinctive sound changes.

Figure 503.
Isoglosses representing the major sound changes



Key:
Wedges show innovative side of shared sound changes.
Numbers in parenthesis refer to sound changes in 4.5.

Shared sound changes	Unique sound changes
a. (1), (2), (3), (4), (5), (6), (7)	c. (9), (10)
b. (8)	d. (11), (12)
	e. (13), (14), (15)
	f. (16), (17), (18), (19)

Chapter Six

THE OJ A/B CONTRAST AND PA

6.1 The Phoneme inventories of OJ and PA

Before we begin our detailed examination of the relationship between the OJ A/B distinction and PA, I would like to compare the two phonological systems, and present a conspectus of the sound correspondences.

Observe the consonant and vowel phonemes of OJ and PA below, remembering that the OJ phonemes we are using were set up using a different principle than that employed for PA, i.e. on the basis of orthographic evidence.

OJ	PA
Consonants	
p t k	*p *t *k (*kkw)
b d g	*b *d *g
	(*t^{ʔ}) *k^{ʔ}
	*ts *tʃ
s j w	*s *ʃ *j *w
	(*j^{ʔ}) *h
z	*z *ʒ
r	*r (*rj)
m n	*m *n (*nj)

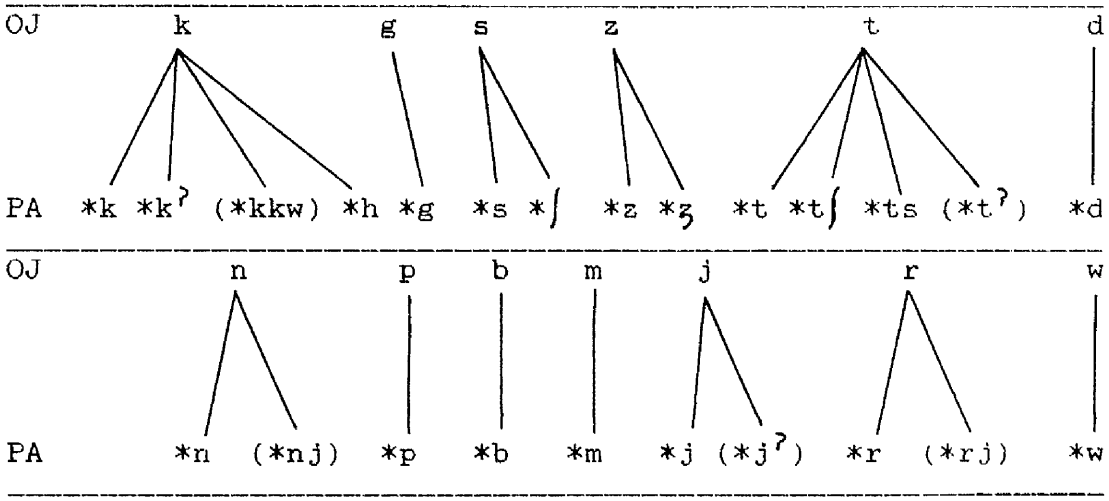
Vowels

OJ	i_1	i_2	e_1	e_2	a	o_1	o_2	u
PA	*i		*ɨ		*a	*o	*u	

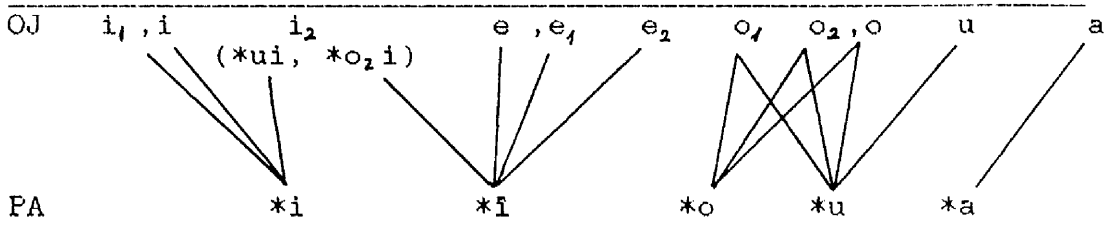
6.1.1 Correspondences between OJ and PA

I here present the entire set of OJ and PA correspondences (note that although I have used a diagram often used for sound changes, these are in fact sound correspondences, i.e. no direction is implied):

Consonants



Vowels



We see a difference in the number of consonants listed for PA and OJ. The question therefore arises of a possible connection between the changes in the consonant system and the A/B issue. However, I shall first deal with the vowel correspondences.

6.2 PA correspondences to the OJ o_1 /o_2 contrast

In this section, I would like to examine how Proto-Amami corresponds to the OJ o_1 /o_2 contrast, and to test the pros and cons of the theories of Shibata (1984).

First, let us enumerate the relevant correspondences below. The syllables in question are underlined. The corresponding pairs are divided into tables depending on the type of OJ vowel involved, i.e. Table 601 for OJ o_1, Table 602 for OJ o_2, and Table 603 for OJ o (non-A/B-type). Note that '_' denotes an irrecoverable segment according to our data and method.

Table 601A. List of corresponding words relevant to OJ o_1

OJ o_1 :: PA *o			
72 ato$_1$ ~ ato$_2$	*ato	73 mi$_1$nato$_1$	*minjato
74 jado$_1$	*jado	76 kado$_1$	*kado
77 tuno$_1$	*tsino	78 mo$_1$mo$_1$	*momo
80 so$_1$	*so	82 iso$_1$	*iʃo
150 suso$_1$	*s_so		

Table 601B. List of corresponding words relevant to OJ o_1

OJ o_1 :: PA *u			
21 siro$_1$	*ʃirju	67 ko$_1$gatana	*kugatana
68 ko$_1$mura	*kubura	83 jo$_1$wa	*juwa
84 jo$_1$naka	*junaha	85 majo$_1$	*maju
138 ko$_1$	*ku	140 ko$_1$	*-ku-
141 ko$_1$su	*ku_-	143 pako$_1$	*pakku
146 to$_1$zi	*tuʒi	147 to$_1$gu	*tug-
148 kuro$_1$	*k$^{\text{ʔ}}$uru	152 jo$_1$ru	*juru

Table 601X - Exceptions to Table 601

66 ko$_1$	::	*kkwa

Table 602A. List of corresponding words relevant to OJ o_2

OJ o_2 :: PA *u			
4 ko$_2$si	*kuʃi	112 to$_2$mu	*tumĩ
7 to$_2$ki	*tuki	113 to$_2$mo$_2$gara	*tungara
8 to$_2$si	*tusi	114 oto$_2$pi$_1$to$_2$	*ututu
9 to$_2$ri	*turi	115 oto$_2$su	*utuʃ-
10 pi$_1$to$_2$	*tʃu	116 oto$_2$	*utu
12 wopi$_1$to$_2$	*wutu	117 mo$_2$to$_2$	*mutu
14 pi$_1$to$_2$pi	*tʃui	118 jo$_2$do$_2$mi$_1$	*judumi

15	pi/ to$_2$ to$_2$ se	*t∫utu∫i	123	no$_2$ mu	*num-
16	mi/ to$_2$ se	*mit∫-	125	mo$_2$ tu	*mut∫-
17	wodo$_2$ ri	*wuduri	126	mo$_2$ no$_2$	*mun
18	no$_2$ ri	*nuri	127	mo$_2$ no$_2$ gatari	*mungatar_
19	no$_2$ ri	*nuri	128	pi/ ro$_2$	*pirju
20	ki/ no$_2$ pu	*k$^?$inj_	129	oro$_2$ su	*uru_-
23	no$_2$ mi$_2$	*numi	132	jo$_2$	*ju
43	ko$_2$ me$_2$	*kumï	133	jo$_2$ su	*jus-
87	ko$_2$ to$_2$ si	*kutu∫i	134	jo$_2$ ru	*jur-
88	ko$_2$ no$_2$	*kun	135	jo$_2$ mu	*jum-
89	ko$_2$ no$_2$ jo$_2$	*kun. ju	136	jo$_2$ tu	*juutsï
90	ko$_2$ re	*kurï	161	no$_2$ go$_2$ pu	*nug_-
91	ko$_2$ gu	*kug-	162	to$_2$ ga	*tuga
92	ko$_2$ zo$_2$	*kuzu	169	tamoto$_2$	*tam_tu
95	ko$_2$ to$_2$ ba	*kutuba	225	to$_2$ woka	*tuuka
99	ko$_2$ ri	*-guri	228	oipi/ to$_2$	*ut∫u
100	ko$_2$ ro$_2$ su	*kut∫-	241	wono$_2$	*wun
101	ko$_2$ we	*kui			
102	jo$_2$ ro$_2$ ko$_2$ bu	*juruku_			
106	nago$_2$ ri	*naguri			
107	to$_2$	*tu			
108	to$_2$ bu	*tub-			
110	to$_2$ po	*tuu			
111	to$_2$ pori	*tuuri			

Table 602B. List of corresponding words relevant to OJ o_2

OJ o_2 :: PA *o			
22 $mi_1 no_2$	*minjo	131 oso_2	*oso
155 $ko_2 ko_2 ro_2$	*kokoro	160 $no_2 ko_2 ru$	*nokor-
164 $to_2 mo_2$	*tomo	165 $to_2 ko_2 ro_2$	*tokoro
166 $to_2 no_2$	*tono	167 $to_2 mo_2$	*tomo
171 no_2	*no		

Table 602X - Exceptions to Table 602

13 $pi_1 to_2$	*t$^{\text{ʔ}}$ii-
130 $so_2 mu$	*simi
157 $ko_2 no_2 pa$	*kinpa

Table 603A. List of corresponding words relevant to OJ o

OJ o :: PA *u			
12 $wopi_1 to_2$	*wutu	231 po	*pu
17 $wodo_2 ri$	*wuduri	232 posi	*puʃi
31 $wogi_2$	*wugi	233 pone	*puni
56 $woke_2$	*wuhë	235 moti	*mutʃi
110 $to_2 po$	*tuu-	236 $momi_1$	*mumi
111 $to_2 pori$	*tuuri	237 mori	*muri
114 $oto_2 pi_1 to_2$	*ututu	238 kumo	*k$^{\text{ʔ}}$ubu
115 $oto_2 su$	*utuʃ-	239 wo	*wu
116 oto_2	*utu	240 wo	*wu

129 oro$_2$su	*uru_-	241 wono	*wun
178 wopi$_2$	*wui	242 wori	*wu_(_)
183 oki$_1$	*ukki	243 uwo(iwo)	*j$^{\text{P}}$u
193 obi$_1$	*ubi	244 to$_2$wo	*tu_
201 wo(mi$_1$na)	*wu(nagu)		
214 oja	*uja		
215 orabi$_1$	*urab_		
216 poka	*puka		
225 to$_2$woka	*tuuka		
226 mamori	*maburi		
228 oipi$_1$to	*ut∫u		

Table 603B. List of corresponding words relevant to OJ o

OJ o :: PA *o			
131 oso$_2$	*oso	149 omosiro	*omosiro
164 to$_2$mo	*tomo	220 amori	*amor_
221 awo	*oo	222 kapo	*kao
224 sawo	*so		

Table 603X - Exceptions to Table 603

230 omo	*amma

Observe that with only a few exceptions, OJ and PA show the following correspondences:

We find that OJ o$_1$ corresponds to PA *o word-

finally only. Sometimes both OJ o_1 and o_2 correspond to PA *o; however, this correspondence is observed only when the PA word is in the shape of *(C)oCo. When the OJ word has the shape of -apo- and -awo- we find that the PA consonant is absent, and the OJ o also corresponds to PA *o. PA *u corresponds to the other OJ vowels (i.e. o_2, o, and the non-word-final o_1).

6.2.1 Sound correspondence for OJ o_1/o_2 and PA

Based on the above examination, we can set up the following sound correspondences between OJ and PA:

Corr. No.	OJ		PA
1.	$-o_1$	::	*-o
2.	$-o_1-$	::	*u
3.	o_2	::	*o in PA *(C)oCo
4.	o_2	::	*u elsewhere
5.	o	::	*o in PA *(C)oCo and in OJ -awo- and in OJ -apo-
6.	o	::	*u elsewhere

6.2.2 Exceptions to our sound correspondences

To the sound correspondendences set up above we

find the following exceptions.

Corr. 1 (which concerns only word-final position) is substantiated by the 9 items from Table 601A. We find the following six exceptions (found in Table 601B):

21	OJ	siro$_{/}$	::	PA *sirju
85	OJ	majo$_{/}$	::	PA *maju
138	OJ	ko$_{/}$	::	PA *ku
140	OJ	ko$_{/}$	::	PA *-kku
143	OJ	pako$_{/}$	::	PA *pakku
148	OJ	kuro$_{/}$	::	PA *k$^{?}$uru

To Corr. 2 (found in word-medial position) substantiated by 8 items (67, 68, 83, 141, 146, 147, 152) from Table 601B, we find one exception (from Table 601A):

78	OJ	mo$_{/}$mo$_{/}$	::	PA *momo

Remember, however, that in 4.5, we recognized the existence of vowel harmony in PA, viz. we did not identify the existence of words in the shape of *CuCo or *CoCu; we only found cases of *CuCu and *CoCo. Taking this fact into consideration, the case of (78) need no longer be treated as an exception. That the second *mo in (78) *momo corresponds to OJ mo$_{/}$ is evidence in favour of the corresondence OJ -o$_{/}$ :: PA *o. Thus, it can be well understood that the first syllable cannot be mu, whichever - *mu or *mo - its previous form might have been.

Taking into consideration the fact that there is

no single case beside (78) where non-word-final o_1 corresponds to PA *o, I will assume that the Pre-PA form (i.e. before assimilation occurred) of PA *momo was *mumo.

Corr. 3, found in the specific PA environment *(C)oCo, is substantiated by seven examples from Table 602B (131, 155, 160, 164, 165, 166, 167), without exception.

To Corr. 4, substantiated by the 55 items found word-medially and word-finally, from Table 602A, we find the following two exceptions (from Table 602B):

22 OJ $mi_1 no_2$ :: PA *minjo

171 OJ no_2 :: PA *no

Corr. 5 (for the specific environments of PA *(C)oco, OJ -awo-, and OJ -apo-) is substantiated by six items from Table 603B (131, 149, 164, 221, 222, 224) without exception.

Corr. 6, found word-initially, word-medially and word-finally, is substantiated by the 33 items from Table 603A, with one exception (from Table 603B):

220 OJ amori :: PA *amor_

Finally, one should note that the number of cases substantiating the correspondence OJ $-o_1$ :: PA *o is not large. However, it is a fact that the PA words having *o in these three tables, (when the word shape is not *CoCo), are concentrated in those cases where OJ $-o_1$ is involved.

6.3 PA correspondences to the OJ i_1/i_2 contrast

I here provide three tables for the comparison involving OJ i_1, i_2, and i. The compared pairs have been selected from our master list only when the PA words, or the relevant PA segments, are available.

Table 604. List of correspondences relevant to OJ i_1

			OJ i_1				PA *i
7	to$_2$ki$_1$	::	*tuki	191	tabi$_1$	::	*tabi
16	mi$_1$to$_2$se	::	*mit∫	193	obi$_1$	::	*ubi
20	ki$_1$no$_2$pu	::	*k$^{\text{ʔ}}$inj_	194	mi$_1$ki$_1$	::	*mikki
22	mi$_1$no$_2$	::	*minjo				
73	mi$_1$nato$_2$	::	*minjato	199	mi$_1$mi$_1$	::	*mimi
97	ko$_2$no$_2$mi$_1$	::	*k_n_mi				
128	pi$_1$ro$_2$	::	*pirju	200	jumi$_1$	::	*jumi
153	pi$_1$ru	::	*piru				
179	ki$_1$mo$_1$	::	*k$^{\text{ʔ}}$im_	202	ki$_1$ru	::	*k$^{\text{ʔ}}$ir-
180	ki$_1$ru	::	*k$^{\text{ʔ}}$ir-	203	ki$_1$zu	::	*k$^{\text{ʔ}}$izï
182	aki$_1$	::	*aki	236	momi$_1$	::	*mumi
183	oki$_1$	::	*ukki	245	usagi$_1$	::	*usagi
184	seki$_1$	::	*sëkki				
186	agi$_1$	::	*agi				

Table 605. List of correspondences relevant to OJ i_2

	OJ i_2		PA *i			
23	$no_2 mi_2$	::	*numi	31	$wogi_2$	::	*wugi
27	mi_2	::	*mi	32	$sugi_2$	::	*sïgi
28	$urami_2$	::	*urami	34	pi_2	::	*pir_
29	$kami_2$	::	*kami	176	$ki_2 ri$	::	*k$^{\text{ʔ}}$iri
30	$tuki_2$	::	*tsïki	178	$wopi_2$	::	*wui

Table 605X - Exception to Table 604

25	ki_2	::	*kï

Table 606. List of correspondences relevant to OJ i

	OJ i		PA *i			
4	$ko_1 si$	::	*ku∫i	99	$ko_2 ri$	::	*-guri
8	$to_2 si$	::	*tu∫i	106	$nago_2 ri$	::	*naguri
9	$to_2 ri$	::	*turi	111	$to_2 pori$	::	*tuuri
17	$wodo_2 ri$	::	*wuduri				
18	$no_2 ri$	::	*nuri	124	$ino_2 ti$	::	*inj_t∫i
19	$no_2 ri$	::	*nuri	146	$to_1 zi$	::	*tuzi
21	$siro_1$	::	*∫irju	149	omosiro	::	*omosir_
60	$ke_2 buri$	::	*kïbu∫i	176	$ki_2 ri$	::	*k$^{\text{ʔ}}$iri
65	$me_2 guri$	::	*miguri	205	$kape_1 si$	::	*këë∫i
82	iso_1	::	*i∫o	226	mamori	::	*maburi
87	$ko_2 to_2 si$	::	*kutu∫i	232	posi	::	*pu∫i

36	ike$_2$	::	*i__	235	moti	::	*mut$\int$i
37	ime$_2$	::	*imï	237	mori	::	*muri
				252	mukasi	::	*muka$\int$i

Observe that our tables show nothing more than what has been established in past research; viz. except for the case of OJ ki$_2$ for 'tree' (25), OJ i$_1$, i$_2$, and i correspond to PA *i exclusively. We will represent this correspondence in the following diagram:

Corr.	OJ		PA
7.	i$_1$, i$_2$, i	::	*i
	exception: i$_2$ (ki$_2$)	::	*ï

In (189) we find the correspondence OJ i :: *j. I assume that this correspondence is caused by the absence of *p in the PA word, which is, on the contrary, present in the OJ word; cf. (189) OJ ipapi$_1$ :: PA *j_ë.

6.3.1 OJ ki$_2$ and PA kï

It is an accepted fact (first claimed by Hattori 1963) that the i$_2$ in OJ ki$_2$ 'tree' corresponds to the MdR vowel (which I will represent by 'Y' in the diagram below),

which corresponds to OJ e_1, e_2 and e. However, OJ i_2 in general corresponds to the MdR vowel (represented below by 'X') which corresponds to OJ i_1, i_2, and i. Observe:

OJ		MdR
i_1, i_2, i	::	X
ki_2 'tree' e_1, e_2, e	::	Y

Past research, especially by Hattori, has made it clear that the difference in outcome between OJ ki_2 'tree' and Ci_2 in general is ascribable to different Pre-OJ sources. These sources have been reconstructed by internal methods in previous works on this topic (FN.1). We illustrate this difference as follows:

Pre-OJ		OJ
*ko_2i 'tree'	>	ki_2 'id'
*ui	>	i_2 (in general)

This hypothetical historical process applies, in fact to almost every dialect of the Ryukyu Islands. We can illustrate this process as follows. 'PX' and 'PY' represent different PR forms (syllables) which we do not attempt to reconstruct in the present work.

Footnote 1. Ōno (1974) and Yamaguchi (1974) provide the best summary. Also refer to 2.3.5.

Figure 601. Historical development of Pre-OJ diphthongs

Post-OJ & MdJ	OJ	Pre-OJ (Proto-JR)	PR	PA
Ce	<---- Ce_2/e_1	<--- *Cai *Cia	----> *PX	-----> *Ci
		*ko_2i 'tree'		
Ci	<---- Ci_2	<------- *Cui	-------> *PY	-----> *Ci

Observe in the illustration how Pre-OJ *ko_2i 'tree' causes an irregular correspondence in contradiction to OJ Ci_2 :: PA *Ci.

On the basis of the above historical argument, we can formulate the correspondence as follows;

Figure 602.

	OJ		PA
(Pre-OJ *Co_2i >)	Ci_2	::	*Ci
(Pre-OJ *Cui >)	Ci_2	::	*Ci

However, the formulation of these correspondences has been based on the single case of OJ ki_2 'tree'. We will, therefore, look elsewhere for further evidence, which we will do in Chapter Seven.

6.4 PA correspondences to the OJ e_1/e_2 contrast

Of the three different types of vowels which display the relationship between the OJ A/B contrast and Modern Amami, OJ e_1/e_2 has been (and may perhaps continue to be) the least fruitful area of study. There has been, in fact, nothing found in the Amami dialects to reflect the contrast.

This appears to be true of our data as well. Observe the following three tables.

Table 607. List of correspondences relevant to OJ e_1

	OJ e_1		PA *ë
205	kape$_1$si	::	*këë⌋i
207	mape$_1$	::	*mëë
209	jupube$_1$	::	*jubë
210	me$_1$	::	*mëë

Table 607X - exceptions to Table 607

211	me$_1$si	::	*mi⌋or_

Table 608A . List of correspondences relevant to OJ e_2

	OJ e_2		PA *ë
40	kage$_2$	::	*kagë
44	sake$_2$	::	*sëhë
45	take$_2$	::	*dëhë
46	take$_2$	::	*tëhë
50	nabe$_2$	::	*nabë
56	woke$_2$	::	*wuhë
64	me$_2$gusi	::	*më-

Table 608B. List of correspondences relevant to OJ e_2

	OJ e_2		PA *ï
37	ime$_2$	::	*imï
41	kame$_2$	::	*kamï
42	kame$_2$	::	*kamï
43	ko$_2$me$_2$	::	*kumï
48	tume$_2$	::	*tsïmï
53	mame$_2$	::	*mamï
57	ke$_2$	::	*kï
58	ke$_2$	::	*kï
60	ke$_2$buri	::	*kïbuʃi
62	me$_2$	::	*mï
63	me$_2$	::	*mï
65	me$_2$guri	::	*mïguri

Table 609A. List of correspondences relevant to OJ e

	OJ e		PA *ë
70	tone	::	*t_në
184	seki	::	*sëkki

Table 609B. List of correspondences relevant to OJ e

	OJ e		PA *i
15	$pi_1\ to_2\ to_2\ se$	::	*tʃutuʃi
101	$ko_2\ we$	::	*kui

Table 609 C. List of correspondences relevant to OJ e

	OJ e		PA *ï
90	$ko_2\ re$	::	*kurï
233	pone	::	*punï
258	ase	::	*asï

As we see, both PA *ï and PA *ë correspond to all three types of OJ vowel. However, it seems to be the PA phonemic environment, rather than the type of OJ vowel, which decides which one of the two PA vowels will occur.

From Table 609B, we find also that OJ e :: PA i. Insufficient data for Non-A/B e was one of the reasons for conducting my third field work survey in 1988. We must include OJ e :: PA *i in our tables, but in fact I strongly feel that future research will lead either to its

exclusion, or to an unexpected explanation which we cannot, on the basis of the present limited data, find. We note suspicion regarding this correspondence by putting it in parenthesis in our sound correspondences for OJ e; it must remain in doubt until further data can be considered.

In cases (205) and (207), PA *ë is ascribable to an earlier diphthong *ae. Observe the correspondences:

	OJ	::	PA
205	-ape$_1$-	::	*-ëë-
207	-ape$_1$-	::	*-ëë

6.4.1 Summary - setting up our sound correspondences

As far as our data is concerned, although it exposes its limitations most especially in examples for OJ e$_1$, we find nothing in support of the OJ e$_1$/e$_2$ contrast.

The results of our examination can be represented in the following formulation (note that this formulation presupposes that we have no examples of OJ e$_1$ :: PA *ï):

Corr.	OJ		PA
8.	e$_1$, e$_2$, e	::	*ë, *ï
	(e	::	*i)

Remember that in Chapter Four we concluded that *ï and *ë were allophones.

6.5 PA correspondences to OJ u and a

6.5.1 OJ u and the PA vowels

For OJ u, we find two types of correspondences which are observed to be in complementary distribution. The correspondences and the phonemic environments are provided in the following tables.

Table 610A List of corresponding words relevant to OJ u

OJ u :: PA u In environments other than *ts, *s, *z					
28 urami	::	*urami	60 ke$_2$buri	::	*kɨbuʃi
65 me$_2$guri	::	*mɨguri	68 komura	::	*kubura
79 pukuro$_1$	::	*pukkur_	148 kuro$_1$	::	*kʔuru
187 kugi$_1$	::	*kʔugi	200 jumi$_1$	::	*jumi
238 kumo	::	*kʔubu	245 usagi$_1$	::	*usagi
248 kurapi$_1$	::	*kur_	250 kura	::	*kura
251 nuka	::	*nuka	252 mukasi	::	*mukaʃi
254 juka	::	*juka			

Table 610B List of corresponding words relevant to OJ u

OJ u :: PA ɨ / t,s,z_ (OJ) and /*ts, *s, *z_ (PA)					
30 tuki$_2$	::	*tsɨki	48 tume$_2$	::	*tsɨmɨ
77 tuno$_1$	::	*tsɨno	145 tuto$_1$mu	::	*tsɨt_m-
32 sugi$_2$	::	*sɨgi	203 ki$_1$zu	::	*kʔizɨ

We find that item (243) 'fish', not listed above, shows the correspondence OJ uwo :: PA *j$^{\text{ʔ}}$u. This correspondence is, I assume, due to the loss of the earlier *-w- in the PA word. Note also that in this case it is probably OJ iwo 'fish', an alternative form for OJ uwo, which would be cognate with PA *j$^{\text{ʔ}}$u.

6.5.2 OJ a and PA vowels

For OJ a, we find three types of correspondences occurring in complementary distribution. Among the three types, OJ a :: PA *a is so commmon (56 lexical items) that I will give six examples and merely provide lexical numbers for the rest. Full lexical examples and environments for the other two types are provided below.

Table 611A. List of corresponding words relevant to OJ a

OJ a :: PA *a / (all environments other than 611B,C)			
182 aki$_1$	:: *akki	258 ase	:: *asi
28 urami$_2$	:: *urami	50 nabe$_2$	:: *nabë
83 jo$_1$wa$_2$	:: *juwa-	95 ko$_2$to$_2$ba	:: *kutuba

11, 29, 35, 40, 41, 42, 53, 67a,b,c, 68, 71, 72, 73, 74, 75, 76, 84, 85, 106, 113a,b, 127a,b, 143, 157, 162, 163, 169, 186, 191, 196, 198a,b, 201, 214, 215, 216, 217, 220, 222, 223

Table 611B List of corresponding words relevant to OJ a

OJ a :: PA *[ë] *(/ï/) / OJ C_ke$_2$ :: PA *C_hë / OJ C_pe$_1$ :: PA *C_ë					
44	sake$_2$	:: *sëhë	205	kape$_1$si	:: *këë∫i
45	take$_2$	:: *dëhë	207	mape$_1$	:: *mëë
46	take$_2$	:: *tëhë			

Table 611C List of corresponding words relevant to OJ a

OJ a :: PA *o / OJ _wo :: PA _*o					
221	awo	:: *oo	224	sawo	:: *soo

6.5.3 Summary - setting up our sound correspondences

In the previous subsections we have obtained the following sound correspondences for OJ u and a:

Corr.	OJ		PA
9.	u	::	*ï / OJ t,s,z_; PA *ts,*s,*z_
10.	u	::	*u elsewhere
11.	a	::	*ë / OJ C_ke$_2$ :: PA *C_hë / OJ C_pe$_1$ :: PA *C_ë
12.	a	::	*o / OJ _wo :: PA _*o
13.	a	::	*a elsewhere

6.6 Consonant correspondences and the A/B distinction

In the correspondences presented in 6.1.1 above, we found that PA has more consonants that OJ, and that sometimes several PA consonants correspond to a single OJ consonant. On the other hand, PA has potentially fewer vowels (depending on the analysis adopted for the OJ A/B distinction).

In Chapter Two we observed three possible locations for the distinctive element of the OJ A/B contrast; viz. the contrast is located a) in an independent 'glide' element, b) in the consonant, and c) in the vowel itself. Amongst these three possibilities, b) has appeared to past researchers as the least likely. However, what has been overlooked is the possible connection between the consonant system and the A/B issue. Therefore, in the following subsections, we will investigate our data for such a connection.

6.6.1 Positing the PJR vowels

In order to make this investigation possible, it is necessary to posit a PJR vowel system based on the vowel correspondences between OJ and PA. In Figure 603 (below), we have posited a single PJR vowel for those correspondences which are in complementary distribution, linking the relevant correspondences with brackets.

The proposed system is tentative and open to revision (see 8.7).

Note that it can be vividly observed in Figure 603 that it is OJ rather than PA that has most closely retained the PJR vowel contrast.

Figure 603. Vowel correspondences of OJ, PA and PJR

Corr.	OJ		PA		PJR
1.	-o_1	::	*-o	<	*o_1
2.	-o_1-	::	*u		
3.	o_2	::	*o	<	*o_2
4.	o_2	::	*u		
5.	o	::	*o	<	*o
6.	o	::	*u		
	i_1			<	*i_1
7.	i_2	::	*i	<	*i_2
	i			<	*i
	e_1			<	*e_1
8.	e_2	::	*ë, ĭ	<	*e_2
	e			<	*e
9.	u	::	*ĭ	<	*u
10.	u	::	*u		
11.	a	::	*ë		
12.	a	::	*o	<	*a
13.	a	::	*a		

6.6.2 Examining the correspondences involving OJ k and t

6.6.2.1 OJ k and PA *k, *k^{ʔ}, (*kkw) and *h

Of the four PA consonants, *h, occurring in complementary distribution with *k has no relevance for us here, and (*kkw) is a tentative reconstruction based upon one item (66). As will be seen below, this item is treated as an exception to our correspondence OJ o_1 :: PA *o.

This leaves us with PA *k, and *k^{ʔ}. Let us now examine the correspondences of these PA consonants in relation to their PJR environments.

6.6.2.1.1 PJR environment *o_1 and *o_2

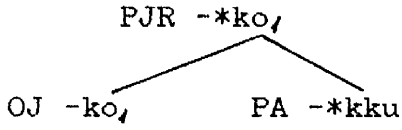
When the environment is PJR _*o_2, we find OJ k :: PA *k regardless of position (e.g.(4) OJ k$o_2$si :: PA *ku∫i) in some 20 lexical items. For PJR _*o_1 we find two items (140 and 143) substantiating OJ k :: PA kk (*/k^{ʔ}/) and three (67, 138, and 141) OJ k :: PA *k. The occurrence is predictable according to position; viz. OJ k :: PA kk in intervocalic position, but OJ k :: PA *k word-initially.

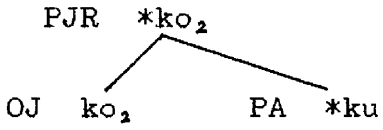
The PA vowels in (138), (140) and (143) are exceptions to OJ -o_1 :: PA *o (Corr. 1) for which PJR *-o_1 has been reconstructed. Note that this exception occurs when OJ k is involved (cf. Table 601B).

For this phenomenon, I shall posit a

sound change where PJR *o_1 had become PA *u in the environment of *k_≠. Note that PJR -*o_2 had also become PA *-u, resulting in the merger of PJR -*o_1 and *-o_2 in PA *u.

However, the PJR contrast has a reflex in the immediately preceding consonant, which was *k in PJR and became *kk in PA in intervocalic position before o_1.



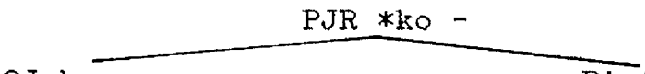


(140) OJ ko_1 :: PA -*kku

(143) OJ $pako_1$ :: PA *pakku

(105) OJ to_2ko_2 :: PA *tuku

(4) OJ ko_2si :: PA *ku∫i



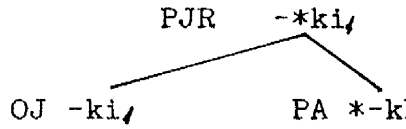
(67) OJ ko_1gatana :: PA *kugatana

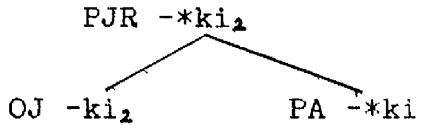
(138) OJ ko_1 :: PA *ku

(141) OJ ko_1su :: PA *ku_-

6.6.2.1.2 PJR environment *i_1 and *i_2

We find further possible traces of the A/B contrast in the environment of PJR *i_1 and *i_2 as follows:





(182) aki_1 :: *akki

(30) $tuki_2$ :: PA tsĩki

(cf. (183), (184)

Intervocalically we find only one case (30) with *i_2 for OJ k :: PA *k and four with *i_1 for OJ k :: PA *kk

Word-initially OJ k :: PA*k$^{?}$ is substantiated by 5 cases (179,180,20,202,203), with one exception (249).

Our correspondence must remain only a suggestion, since we have only one *i_2 case, and one exception (i.e. (7) OJ to$_2$ki$_1$ :: PA *tuki). But we present it because, although traces of OJ i_2 coming from Pre-OJ *o$_2$i and OJ i_1 have been found in the Ryukyu dialects (cf. 6.3.1), until now, there has been no evidence for the contrast of OJ i_2 coming from Pre-OJ *ui and OJ i_1. We therefore recognize an area for further study here.

6.6.2.1.3 PJR environments *e_1 and *e_2

Although our data does not include any cases of PJR *e_1 in relation to *k, we have seven cases of *e_2, and we find that all of these cases show the correspondence OJ k :: PA k. Therefore, it is still possible that PJR *e_1 /*e_2 (i.e. > OJ e_1/e_2) is related to the occurrence of PA *k and *k$^{?}$. This, therefore, provides us with a specific area for future research.

6.6.2.2 OJ t and PA *t, (*ts), t$\int$, and t$^{?}$

The correspondences with OJ t are as follows:

OJ		PA
t	::	*t
t	::	*ts
t	::	*t∫
(t	::	*t$^{?}$)

The second correspondence is found exclusively in the environment PJR _*u; e.g. (30) OJ tuki :: PA *tsiki (five items). The final one is the sole exception to the correspondence discussed in 6.5.2.2.2 below. This leaves us with correspondences involving PA *t and *t∫.

6.6.2.2.1 PJR environment *o_1 and *o_2

The correspondence OJ t :: PA *t is found in the environment of both PJR _*o_1 and o_2 (and *a). From this we conclude that it is not likely to be relevant to the o_1/o_2 contrast.

PJR _*o_1	PJR _*o_2
71 to$_1$ra :: *tura	9 to$_2$ri :: *turi
73 mi$_1$nato$_1$ :: *minjato	12 wopi$_1$to$_2$ :: *wutu
(4 items in total)	(24 items in total)

6.6.2.2.2 PJR environment *i_1

Observe, however, that the OJ i_1 /i_2 contrast might possibly related to the PA consonant. Let us look at the following items where we find OJ t :: PA *t∫:

	OJ		PA
10	$pi_1\ to_2$	::	*tʃu
11	$pi_1\ to_2$dama	::	*tʃ_dama
14	$pi_1\ to_2\ pi_1$	::	*tʃui
15	$pi_1\ to_2\ to_1$se	::	*tʃutuʃi
16	$mi_1\ to_2$ se	::	*mitʃ__

One can assume that PJR -*$i_1 to_2$ became OJ -i_1 to_2 and PA -*tʃu, positing the loss of PJR *i_1- in PA. This tempts us to suggest that PJR *i_1- was the cause of the sound change in Proto-Amami. However, more data is needed to see in what environments PJR *i_2 is found.

It is possible to claim that PJR *t > *PA tʃ was related to the presence of OJ o_2 rather than to the immediately preceding i_1. However, observe the following:

124 OJ ino_2ti :: PA *inj_tʃi

vs.

82 OJ iso_1 :: PA *iʃo

The vowel immediately following *nj in the PA word for (124) is not recoverable, but we can presume that PJR had *o_2 and *o_1 for (124) and (82) respectively (cf. Figure 603 above). This lessens the possibility that PJR *o_2 was the cause for the consonant change PJR *t > *PA tʃ.

(Note that our data provides us with no cases where PJR *e_1 and *e_2 are found to be relevant to OJ t and the PA consonants.)

6.6.3 Implications of consonant changes

Observe the consonant changes and related A/B vowels found in the previous subsections:

	PJR		PA	relevant PJR vowel
1)	*k	>	*kk	$*o_1$ (> PA *u)
				$*i_1$ (> PA *i)
2)	*k	>	*k	$*o_2$ (PA *u)
				$*i_2$ (>PA *i)
				$*e_2$ (>PA *i)
3)	*t	>	*t	$*i_1$

The above illustration confirms that it is nearly always those vowels assigned with the subscript '1' which are involved in the consonant changes, whereas the subscript '2' vowels are not.

As we noted earlier, our data provides us with too little evidence to completely confirm this. However, we can assume that that what is implied in the correlation between the consonant changes and the involved vowels is that merger of the PJR A/B vowels into single PA vowels **would have progressed from $*V_2$ to $*V_1$. For instance:**

$*ko_1$ > $*kko_1$ > *kku

$*ko_2$ > $*ko_1$ > *ku

$*ki_1 > *kki_1$

$*ki_2 > *ki_1$

$*ke_1 > *kke_1$

$*ke_2 > *ke_1$

This suggestion is made on the basis of an earlier argu ment in 4.1.1 and 3.1.3, where we observed the possibility of developments for the merger of earlier vowel contrasts in the modern Ryukyu dialects as follows (note that $C_{1.2.3.4}$ simply denotes that the PR consonants split into different modern consonants; cf. 3.1.1 and 3.1.3):

PR		MdR
*Cu	>	C_1u
*Co	>	C_2u
*Ci	>	C_3i
*Ce	>	C_4i

Let us now consider our above presented assumption in relation to the phonetics of the OJ A/B distinction we discussed in 2.3 on the basis of previous works.

6.6.4 Parallelism in the developments of the PJR A/B distinction in OJ and PA and phonetic implications

6.6.4.1 OJ o_1/o_2

In section 2.3 we hypothesized that 1), OJ o_1 and o_2 are phonetically distinguished by [back] and [rounded] features, and 2), the merger of o_1 and o_2 was implemented according to the universal tendency of vowel systems to be symmetrical. The phonetics and development of o_1 and o_2 can be illustrated as follows:

	Pre-OJ		OJ		MdJ
$*o_1$	*[o]	---------->	o_1 [o]	------>	o [o]
$*o_2$	*[ə]	---------->	o_2 [ɔ]		

Now, compare this with our assumption on the development of PJR $*o_1$ and $*o_2$, and observe the parallelism:

PJR		PA		MdA
$*o_1$	----->	*o	--> *u	--------> u [u]
$*o_2$				

This implies that Pre-OJ $*o_1/*o_2$, and PJR $*o_1$ and

$*o_2$, having become OJ o_1 and o_2 respectively, are identical.

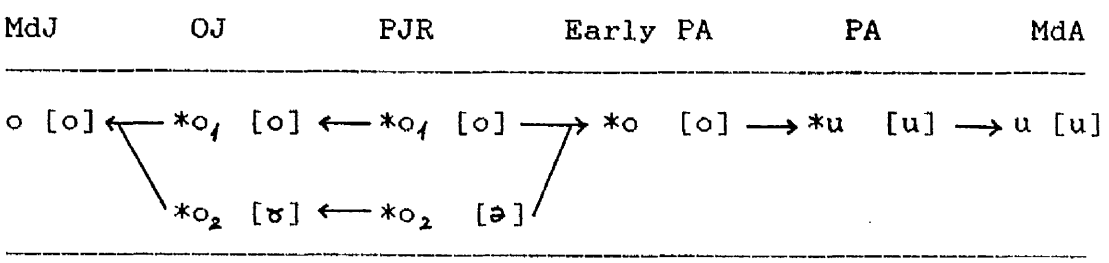
Moreover, we must not overlook the fact that the development of Pre-OJ $*o_2i$ to OJ i_2 (e.g. (25) OJ ki_2 'tree') led us to the conclusion that PR and Japanese split in the time of Pre-OJ (cf. 3.1.1). The significance of this is that it supports the inferred change Pre-OJ $*o_2$ $*[ə]$ > OJ o_1 [o].

We know, from the 'theory of diphthongal origins' (2.2.5) and from Matsumoto's examination of the sources for OJ e_1 /e_2 and i_1/i_2 (2.2.6), that the main Pre-OJ sources for e_2 and i_2 were *ai and *ui. Now we must relate this to the fact that $*o_2i$ has different outcomes in Japanese and Ryukyuan. This difference in outcomes accounts for our assumption made above that Pre-OJ $*o_2$ [ə] > OJ o_1 [o].

Consider the hypothesis that earlier in Pre-OJ (when PR and Japanese split), $*o_2$ had the quality *[ə], and thus $*o_2i$ had *[əi], and that later the value of $*o_2$ got closer to that of $*o_1$ (tentatively [ʊ]). Thus, Pre-OJ $*o_2i$ had a value close to *[oi]. This indicates that, when PR and Japanese had just split, PR had $*o_2i$ [əi] and *ai [ai], which later merged into PA *ï, whereas Pre-OJ later had $*o_2i$ [ʊ] and *ui [ui], which merged into OJ i_2.

To sum up this section, I will illustrate the complete parallel developments discovered so far from PJR

to Japanese, and to the Amami dialects:



Finally, note that the previous works on the OJ A/B distinction presented in 2.2.3 have come up with results as varied as */ə/ to */ö/ for OJ o_2. This variety may perhaps be explained by the above inferred phonetic change of o_2: i.e. *[ə] > *[o].

6.6.4.2 OJ i_1/i_2 and e_1/e_2

In the case of OJ i_1/i_2 and e_1/e_2, we could not confirm this kind of parallelism strongly, due to the insufficiency in our data. Therefore, I would like to leave the issue for future studies.

6.7 Summary

In this chapter we have presented 1) a comparison of the OJ and PA vowels and our conclusions in the form of sound correspondences, 2) an investigation of possible consonant changes between PJR and PA motivated by the PJR A/B distinction, and 3) a review of the phonetic aspects of the OJ A/B distinction.

We have established eight vowel correspondences between OJ and PA, and recognized that though our data is not extensive enough for a firm formulation, PJR allophonic difference in *k and *t are likely to have become phonemic by the time of PA by the loss of the PJR A/B distinction.

The importance of this lies in the fact that it opens up a new area of research: the connection of the A/B issue with formulated consonant sound changes.

The implications of this are, 1), we ought, in order to frame a more accurate and phonetically discriptive picture of the A/B distinction, to continue to investigate the relevant consonants, and 2) PA and PJR, and other as yet unreconstructed proto-languages, can provide us with the segments with which we can make this research possible.

Finally, we must note that the comparison of OJ and PA has also raised further issues relative to the PJR vowel system (see 8.7), though they are not strictly relevant to the A/B issue.

Chapter Seven

SOME PROBLEMS RECONSIDERED

7.1 The OJ o_1 / o_2 contrast

7.1.1 Shibata - OJ o_1 :: Am o

The most important comparisons between OJ and the MdAm dialects are provided by Shibata 1984. The strength of his work lies in the fact that his data were collected from as many as one hundred places. However, as his data provide only eleven cases of comparison where OJ o_1 is involved, Shibata fell short of reaching our conclusion that OJ o_1 corresponds to PA *o only in the word-final position.

The eleven items are listed below. Observe how Shibata set up the comparison. Most of the time, a syllable or syllables corresponding to each OJ form is presented. However, note that in most of the cases there are from four to over twenty dialects showing vowels (syllables) different from those he decided to select as examples of the correspondence. For example, in the case of (389) kumo$_1$, four out of approximately one hundred dialects researched are found to have -mu rather than -mo, -ð.

In the following table, the first two columns

show Shibata's work, while the third column shows our reconstructed PA where available. The underlining of syllables of the OJ words is by the writer.

Table 701. Shibata's o_1/o_2 comparison and our PA forms

	OJ	MdAm	PA
389	kumo$_1$	-mo, -ð (-u in 4 dial.)	-
390	nuno$_1$	-no, -ro (-u in 6 dial.)	-
391	hato$_1$	-to (-u in 6 dial.)	-
392	so$_1$de	su-, ʃu- (so- in 13 dial.)	-
393	Fako$_1$	-ku (-ko in 17 dial.)	143 *pakku
394	jo$_1$ru	ju-	152 *juru
395	imo$_1$ ~ umo	ʔumu (-mo in 2 dial.)	-
396	aso$_1$bi	-su-, -sʊ̈-, -sɪ̈- (-so- in 10 dial.)	-
397	ko$_1$m~bura	-ku- (ko- in 12 dial.)	68 *kubur_
398	do$_1$ti	du-	-
399	kumo$_1$	-bu	288 *kˀubu

According to the data provided by Shibata (1984) as observed in the above table, there are only three lexical items which show the correspondence OJ o_1 :: Am o; i.e. (389), (390), and (391). The other cases all show OJ o_1 :: Am u (FN.1).

However, he does not note that OJ o_1 and Am o do not correspond in any position other than the word-final one. Indeed, Shibata could not have reached the same

conclusion which we have, because he has only two cases which show the correspondence OJ -o_1 :: Am u; i.e. (393) Fako$_1$ :: Am -ku, and (399) kumo$_1$ :: Am -bu. (In Shibata's list, the OJ item in (399) is given as kumo$_1$, but the word is normally recognized as kumo.)

Shibata's work is based on the modern Amami dialects. I would like to examine and reframe his comparisons by referring them to the proposed correspondence bewtween OJ and PA which we set up in the immediately preceding chapter.

According to Shibata, only three cases among the eleven listed show the correspondence OJ o_1 :: Am o. The other eight are, hence, labelled as exceptions to this rule, since they show OJ o_1 :: Am u.

However, one should immediately notice that among the cases which he classifies into the category of 'exceptions', five show a correspondence which is in fact parallel to our OJ -*o_1- :: PA -u- (and Shibata's OJ o_1 :: Am u).

Footnote 1. It is possible that the cases shown here are merely a part of a larger series of other cases not listed by Shibata. I base this suggestion on his preliminary remarks on page 427: 'As I had obtained some evidence for the existence of the Amami vestige for the Nara period Japanese o_1 and o_2 distinction, I prepared some proper cases which are appropriate to confirm the vestige' (Shibata 1984, p. 427). His statement is somewhat unclear to me. It seems to call for the interpretation that he had preliminary evidence which made him decide to examine more data in order to confirm the above correspondence.

The relevant cases are:

392	OJ so$_1$de	::	Am su-, ʃu-
394	OJ jo$_1$ru	::	Am ju (PA (152) *juru)
396	OJ aso$_1$bi	::	Am -su-, -sụ-, -sī-
397	OJ ko$_1$m/bura	::	Am -ku- (PA (68) *kubur_)
398	OJ do$_1$ti	::	Am du-

Shibata tries in various ways to find reasons for what he calls his 'exceptions'. For the case of (392), for instance, he quotes the case of OJ so$_1$de from the 'Daigenkai' (F. Otsuki, 1931), a set of dictionaries in five volumes. He implies a change in OJ so$_2$de > so$_1$de. The 'Daigenkai' etymologizes this OJ word as: so 'clothes' + te 'hand' > so$_2$de 'sleeve'. Normally it is recorded so$_1$de in OJ texts (cf. JBKDJ, 402 f).

As we have argued in 2.2.6 a sound change o$_2$ > o$_1$ was probably operating at the time of OJ (around AD 700) (FN.2). We can thus support Shibata's assessment that so$_2$de (> so$_1$de) corresponds to Am su-, ʃu-.

For the case of (394), Shibata suggests that this word OJ jo$_1$ru 'night' could have been conflated (Shibata's word is konkō in Japanese) with another OJ word, jo$_2$pi 'evening, the first night of wedding'. He suggests therefore, that the correspondence OJ jo$_2$pi :: Am ju- is more appropriate to the case of (394).

Footnote 2. Eg. kuso$_2$ 'personal name' (AD 702) > kuso$_1$ (AD 720)

As for the case of (397), Shibata simply says that it is 'unexplainable for the moment.'

His evaluation of the above three cases might possibly be justifiable. However, I believe that it is much more likely that these three cases simply substantiate our sound correspondence OJ -o$_1$- :: PA *-u.

The comparison in (395), OJ imo$_1$ ~ umo :: Am ʔumu, is undoubtedly an example for OJ o :: Am u (or our OJ o :: PA *u). In other words, Am -mu (in this case) corresponds to OJ -mo in umo, rather than to OJ -mo in imo$_1$. Observe, in the map which Shibata provides for this case (432 f.), that more than 95% of the dialect words collected by him for this case are in the shape of ʔumu. Having analysed the phonemic reconstruction in the previous chapters, and guided by the tendencies they have suggested, we can posit that if this case had been chosen for our reconstruction, the most likely PA word would have been *umu.

Considering the above, we should regard the case of (395) as an example for both Shibata's implied OJ o :: Am u, and our own OJ o :: PA *u.

Shibata himself saw the need for doubting the advisability of comparing OJ do$_1$ti and Am duʃi˜du·ʃ (398). He quotes this comparison from K. Yanagida (no detail is given), and comments with the suggestion that MdAm duʃi˜du'ʃ and Chinese '同士' (pronounced in MdJ as [do:ʃi]) are cognate.

Although the map which includes (398) (434f) does not show how Am duʃi and duːʃ are distributed, we may confidently suggest that duːʃ comes from Sib and Sho, and perhaps from some of the other dialects on Kakeroma Island. Observe words such as (4) Sib kUʃ 'waste' and Sho kuʃ ~ kuʃi 'id' vs. kuʃi and koʃi 'id' in the other dialects.

If this is the case, we can reconstruct the form *dusi (*[duʃi]) from the two Am words (duʃi ~ duːʃ). Moreover, we can expect to find MdAm words in the shape of [dutʃi] in general and [dutʃ] ~ [duːtʃ] ~ [dutʃi] in Sib and Sho, corresponding to the OJ word do$_1$ ti.

Based on the above considerations, I would like to conclude that Am duʃi ~ duːʃ is cognate with the Sino-Japanese word '  ' [doːʃi], rather than with OJ do$_1$ ti. Therefore, as Shibata suggests, the comparison of OJ do$_1$ ti :: Am duʃi ~ duːʃ is inappropriate.

For the case of (399) (OJ kumo$_1$ :: Am -bu), we find ourselves in agreement with Shibata. Our reconstructed PA form cognate with OJ kumo is *k$^{?}$ubu. The reconstruction of *-bu in this word is based on -bu in six Amami dialects and -mo in Sho. Shibata's data shows approximately 90% of the surveyed localities giving -bu, and most of the rest -mo (see map 399 on page 435).

Like Shibata we ascribe the words having -bu to the borrowing of kobu 'spider' from the Kyushu dialects. This argument is more plausible than hypothesizing a sound change *-mo > -bu in the Amami dialects. The point at issue concerns the Amami reflexes showing -mo. Where did

they come from? Are they from MdJ kumo 'spider' or are they cognate with OJ kumo 'id'? Our conclusion in 4.3.4.3 was that Amami words in the shape of kumo are due to lexical borrowing from MdJ. The grounds given for this interpretation are that, if they were cognate with OJ kumo they should be in the shape of kumu rather than kumo (cf. our correspondence OJ non-A/B o :: PA u). Again, note that although Shibata transcribes this OJ word as kumo$_1$, I believe it to be a mistranscription, as the word is generally given as kumo.

7.1.1.2 Summary - Shibata's OJ o$_1$ :: Am o

In the immediately preceding section, we examined the eleven cases provided by Shibata 1984 claimed to contain OJ o$_1$ and their Amami cognates.

According to Shibata, only three (389, 390, and 391) support his OJ o$_1$ :: Am o. Hence, he considers the others to be exceptions.

By referring these eleven cases to our proposed correspondences, however, we find that the only exception is in fact (393) Fako$_1$ :: Am -ku. In this case Shibata finds OJ o$_1$ :: Am u, as we do: OJ -o$_1$ :: PA *-u.

Shibata does not attempt to account for this exception, except to say that he suggests a lexical borrowing from 'Common Ryukyu' (sic) haku. Our data do

not suggest any more likely explanation.

7.1.2 Shibata - OJ o_2 and MdAm u

As regards the correspondences between OJ and Amami where OJ o_2 is concerned, Shibata 1984 details twelve lexical items from his data. The comparisons are as below:

Table 702. Shibata's comparison of OJ o_2 and our PA forms

	OJ	MdAm	PA
401	ko$_2$si 'waste'	ku- (do- in 5 dial)	4 *kuʃi
404	to$_2$ri 'bird'	tu- (to- in 16 dial)	9 *turi
405	no$_2$ri 'seaweed'	nu- (no- in 15 dial)	19 *nuri
406	jo$_2$mi 'reading'	ju- (jo- in 16 dial)	135 *jum-
407	o$_2$ki/nisi 'SW wind'	u- (o- in 3 dial)	-
410	ko$_2$ti 'towards the speaker'	ku- (do- in 22 dial; Fu- in 1 dial)	-
402	ko$_2$to$_2$ba 'language'	kutu- (koto-in 7 dial)	95 *kutuba
403	jo$_2$ko$_2$ 'horizontal'	juku (joko, juko in 46 dial)	103 *j_k_
408a, 409b	ko$_2$ko$_2$ro$_2$ 'mind'	koHo ~ kuHo(:) [H = k, h,n,x,F] in 13 dial) -ro (-ru in 3 dial)	155 *kokoro
411	jamato$_2$ 'Japan'	-to- (-tu- in 6 dial)	-
412	o$_2$mo$_2$te 'instep'	omo- (no other form)	-

Among these twelve cases relating to OJ o_2,

eight are examples for both Shibata's OJ o_2 :: Am u and our OJ o_2 :: PA *u; cf. 401, 404, 405, 406, 407, 410, 402, and 403 (note, however, that (403) has as many as 46 dialects with forms containing /o/, and that we could not reconstruct either vowel for this item in Chapter Four).

Shibata finds three counter examples (408, 409 $\underline{ko_2}$-$\underline{ko_2}\underline{ro_2}$, 411 jamat$\underline{o_2}$, and 412 $\underline{o_2}\underline{mo_2}$te) in which he finds Am o most of the time.

However, three of these (408, 409, and 412) are examples for our OJ o_2 :: PA *o (Corr. No.'s 3 and 5), and not for Shibata's OJ o_2 :: Am u.

Shibata's comparison in (410), MJ ko?ti :: ku (Fu) raises different problems. This word is not attested in OJ; it first appears in the text of Jūi-shū, a text of MJ. Shibata posits that this word existed in OJ and had *ko_2 because of the way Am u and o are found to correspond to o_2 in his data. We do not, however, accept this claim, because of Correspondences 2 and 4 (6.1.2) which we have set up with PA.

Having discussed all the cases Shibata provides for the case of OJ o_2, we can now recognize only one case in his data which is an exception for both his OJ o_2 :: Am u and our OJ o_2 :: PA *u and *o (Corr. 3 and 4). This is (411), OJ jamat$\underline{o_2}$ :: Am -to- (our reconstruction, if attempted should result in PA *to).

Finally I would like to comment on Shibata's controversial manner of transcribing the generally accepted

OJ syllable o (i.e. Øo which can occur only in morpheme-initial position) as o_2.

Observe the two OJ words in Table 702, transcribed as (407) $\underline{o_2}$kinisi and (412) $\underline{o_2}\underline{mo_2}$te, where we find OJ o_2- (underlines by the writer).

In a controversial article, Hattori (19) suggests the possibility that the A/B distinction exists even for OJ Øo- despite the lack of an orthographic distinction. Note, however, that Hattori does not intend to substantiate his hypothesis on the possible contrast $Øo_1$ :: $Øo_2$. He simply cautions us that absence of an orthographic distinction does not necessarily mean absence of phonological contrast.

For Hattori's caution, we should now refer back to our analysis of non-A/B Co in 2.2.4.1. Justifying the theory of α- and β- group graphemes of Mori (1981) in 2.2.3.6, we attempted to clarify the A/B status for the non-A/B Co syllables. For, as Table 203 (2.2.4.1) illustrates, the result of our analysis shows that OJ Øo falls exclusively into the Co_2 category, whereas OJ po, mo, and wo (bo is not attested) fall, in almost all cases, into the Co_1 category.

Note also that, as pointed out by Matsumoto (1984) we can correctly relate the Co_1/Co_2 distinction to a phonetic element related to the feature [+ lab.] as when we see no A/B contrast in the case of Øo, po, bo, mo, and wo. Following this argument, it would seem that Øo must thus have shared the same phonetic feature as the Co_2 syllables,

because it had wo as its β- counterpart of the A/B set.

Based upon our analysis of non-A/B Co syllables through the 'α-group' MC values, and upon the above view of Matsumoto 1984, we find no reason to continue to consider the possibility of the Øo$_1$ :: Øo$_2$ contrast in this context. OJ Øo was o$_2$ constrasting with OJ wo as o$_1$. Hence, the contrast Øo$_1$ :: Øo$_2$ did not exist.

Let us then come back to Shibata's transcription of OJ Øo$_2$. The grounds for his transcribing this as Øo$_2$ are inappropriate, since, as we have now found, Øo$_1$ did not occur in OJ.

For the case of (407) o$_2$kinisi, Shibata claims the o$_2$- solely because Am u- corresponds to it. Note that in his analysis he does not allow space for OJ non-A/B Co syllables. Therefore, he cannot reach the conclusion which we have reached, i.e. OJ o :: PA *u (Corr. 6). In general, PA *u has resulted throughout in /u/ in the seven modern Amami dialects chosen for our reconstruction of PA, except when lexical borrowing from Japanese is involved (cf. 4.4.3.3). With reference to this historical development, one can not doubt that Shibata's 'Am u-' corresponding to OJ Øo$_2$ represents the reflexes of PA *u.

At any rate, it is now clear that Shibata is not justified at all in transcribing OJ okinisi as o$_2$kinisi for the reason that Am u- corresponds to the initial o- as additional evidence. Shibata quotes from the IKJ (Iwanami classic Japanese dictionary (1983) by Ōno et al) which, he

says, assumes the o- of this word to be o_2-. I do not, however, find such a statement in the IKJ.

Shibata does not state the reason(s) for transcribing OJ omo$_2$te as 412 o$_2$mo$_2$te (underlining by the writer). I must suppose that the idea comes from several well-known facts of OJ synchronic phonology; viz: 1) o_2 and o_2 can co-occur in the same morpheme; but, 2) o_2 and o_1 can not co-occur in the same morpheme, etc. These synchronic facts, first established by Arisaka (1957), however, do not cover the case of non-A/B o. In fact, when viewed purely in terms of the OJ orthographic forms, such combinations as o and o_2, and o and o_1, etc are in fact, as we are now seeing, attested as appearing in the same morphemes. Moreover, bear in mind that the prominent co-occurrence of o_2 and o_2 in the same morpheme (and indeed there would be hundreds of OJ words in the shape of Co_2Co_2 - so many in fact that one could mistakenly think that o_2 can not co-occur with either o_1 or o) does not in itself eliminate the possibility of the co-occurrence of o and o_2.

If the above is correct, Shibata's o_2- is not justified in the case of OJ $o_2$mo$_2$te either.

7.1.2.1 Summary - Shibata's OJ o_2 :: MdAm u

To sum up our examination of Shibata's comparisons relating to OJ o_2 ((407) and (412) now being found to be examples of OJ Øo), I would like to provide the

following classifications.

We have found one lexical item for Shibata's OJ Øo :: Am u (< PA *u) and for our Corr. 6:

	OJ	Am	PA
407	oki$_1$nisi	u- (< *u)	X

Second, we enumerate the examples of Shibata's OJ o_2 :: Am u; our OJ o_2 :: PA *u (Corr. 4):

	OJ		Am	PA
401	ko$_2$si	::	ku-	4 *kusi
404	to$_2$ri	::	tu-	9 *turi
405	no$_2$ri	::	nu-	19 *nuri
406	jo$_2$mi$_1$	::	ju-	135 *jum-
402	ko$_2$to$_2$ba	::	kutuba	95 *kutuba
403	jo$_2$ko$_2$	::	juku	103 *j_k_

Third, we enumerate the examples of our Corr. 3 and 5 where PA *CoCo is involved:

	OJ		Am	PA
408, 409	ko$_2$ko$_2$ro$_2$	::	kuHoro	155 *kokoro
412	omo$_2$te	::	omo-	

It is not known whether MJ koti existed already in OJ. Even if it did, we can not, within the bounds of the approach being employed here, say whether it appeared as ko_1 or ko_2. This is because, in the position where $o_?$ is found, PA *u corresponds to o_1, and o_2, and o (cf. our Corr. 2, 4, and 6).

	OJ		Am	PA
410	$\underline{ko}_?$ti	::	ku-	*<u>ku</u>__

We find that the only exception to both Shibata's OJ o_2 :: Am u (< PA *u) and our Corr 4. in the data is (411):

	OJ	Am	PA
411	jamato$_2$	-to-	-

7.1.3 The Yamatohama correspondence to OJ o_1 and o_2 in Osada 1977, as examined in Shibata 1984

The Amami Hōgen Bunrui Jiten by Osada (1977) (AHBJ - classified dictionary of the Amami dialect) in two volumes is one of the most comprehensive dictionaries of a

Ryukyu dialect. It is the dictionary of one particular Amami dialect called Yamatohama (Ymt), spoken in the village called Yamatoson (cf. Map 1; 1.3.1), which is, in fact the same region where our own Ong dialect is also spoken.

Our interest in this dictionary centres around its extensive corpus of Ymt words together with their Classical Japanese cognates where available (OJ, MJ, etc). It is simply a list - Osada does not attempt any analysis of the sound correspondences between the Japanese of the various historical stages and Ymt.

However, Shibata 1984, in the same work as was discussed in the previous sections, rearranges this list into corresponding pairs which are classified according to OJ o_1 and o_2. Here again, he does not take any note of OJ non-A/B o. Taking his classificaiton as a starting point, we will analyse his work to see what light the present study can shed upon it.

Shibata's classifications of the pairs in comparison are set up by 'examples' and 'exceptions' for the sound correspondences quoted in the previous sections. Here, for the sake of convenience, I will restate Shibata's sound correspondences:

OJ		Am
o_1	::	o
o_2	::	u

In his analysis of the Ymt correspondences, Shibata not only misclassifies cases because of the inadequacy of his overall claim (which we discussed in the previous sections), but also because of methodological weaknesses stemming from an approach which uses Ymt, one particular modern Amami dialect, as the sole basis for comparison.

In the following sections, we will examine his comparisons in as much detail as necessary, with reference to our proposed correspondences (which I quote again below) which we established in 6.3. We will also attempt a reclassification of the cases which are provided by Osada 1977.

Corr	OJ		PA
1.	$-o_1$	::	*o
2.	$-o_1-$	::	*u
3.	o_2	::	*o in PA *(C)oCo
4.	o_2	::	*u elsewhere
5.	o	::	*o in PA *(C)oCo, and OJ -awo- and -apo-
6.	o	::	*u elsewhere

To do this, we shall first discuss the relationship between Ymt (data from which has not, of course, been considered within the system of our reconstruction work for PA) and Ong . We do this in order to be able to bring our reconstructed PA directly to bear on the argument.

7.1.3.1 Shared vowel harmony in Ymt and Ong

I propose to tackle this problem by first recognizing that Ymt belongs to the same dialectal group as Ong.

This approach of connecting Ymt to PA through Ong is valid, I believe, because these two dialects underwent the same phonological innovations. Indeed, the phonological aspect shared by Ymt and Ong is unique, in that it is not shared by the other six dialects gathered for our reconstruction.

Now, let us look at these shared phonological characteristics of Ymt and Ong.

First, observe the following words, which were collected in my first field work survey on Ong (25 Nov. 1985).

tʃoʃa 'one step'	tʃukëëri 'one go'
tʃotoro 'one place'	tʃunuki '(ungiven)'
tʃotaba 'one bundle'	tʃuhiru 'a unit of width'
tʃosazuki 'one J sake cup'	tʃunumi 'one sip'
	tʃuunumi 'drinking at one time'
	tʃuukutʃi 'one bite/sip'
	tʃuunigiri 'one grasp'
	tʃuri 'one person'
	tʃukkin 'at one time'

The above items are a collection of compound words containing the element for 'one.' Note that the element changes its shape, and that this alternation is phonologically conditioned. In other words, it is synchronically formulated as:

$$\text{tʃu(u)} \quad \text{-----}> \quad \text{tʃo / \_Ca,(\_Co)}$$
$$\text{-----}> \quad \text{tʃu / elsewhere}$$

The environment _Co, with a single example only, does not provide evidence relevant to our argument.

The above delineates a vowel harmony which is productive in modern Ong.

It is unfortunate that we do not have, in Osada's data from Shibata 1984, the parallel cases in Ymt to these enumerated cases of vowel harmony. However, some other

cases are quoted in Shibata (444-445 ff., though he does not recognize a productive vowel harmony) which are convincing enough to justify the existence of the same type of vowel harmony in Ymt. Viz:

Vowel Harmony in Yamatohama

'juu 'night',		
'juru 'id'	vs	'jonaha 'midnight' (< jo + naha, 'night' + 'inside')
θumi [vt] 'stopping'	vs	θomari 'stopping' (vi)
'juri 'gathering'	vs	'jorai 'meeting'
xu- 'small/little'	vs	xogatana 'short sword'

In our data on Ong, we collected alternating pairs such as these:

Vowel Harmony in Ong

151 ju 'night'	vs.	84 jonaha 'midnight'
152 juru 'night		35 jojami 'dark of night'
133 jusu 'to put closer'	vs	175 jore 'meeting'

In the Amami dialects, [e] is rarely observed. It is likely that the /e/ in (175) came from an earlier *ai. Observe that PA vowel sequences have resulted in the most unpredictable reflexes in the modern Amami dialects; cf.

Naon jorai~jore 'id.'(not listed in our data). Naon belongs to Yamatoson, to which Ymt and Ong also belong.

7.1.3.2 Common sound changes for Ymt and Ong

In reconstructing PA *u, we formulated the following sound change in Ong (4.6.2)

PA *u > o / _Ca in Ong

As explicitly illustrated in the tree diagram in 5.2, this sound change is a late innovation unique to Ong (see also our isoglosses in 5.3).

Let us see, then, how this change affected the synchronic phonological appearance of modern Ong.

If this sound change was without exceptions, the consequence of its implementation should have been the total absence of words in Ong in the shape of CuCa but not CoCa. As is often the case, however, the sound change has not swept away all the words in the relevant shape. We do find some words in the shape of CuCa. For example (247) ura 'inside, mind', (249) kusa 'grass'. Note that some cases, such as (249) kusa, are ascribable to lexical borrowing from Japanese; cf. MdJ kusa 'id'. The synchronic phonological tendency, however, is that words in the shape of CuCa are rarely found, whereas those in the

shape of CoCa are frequent in Ong.

Now let us come back to the Ymt dialect. Note that we find the same tendency in Ymt. From the ample examples enumerated in the list of Osada (1977), I will pick out and present some here:

ʔo'ja 'parent'
sora 'sky'
θora 'tiger'
mora'i 'receiving'
'jonaha 'midnight'
bo'jabo'ja 'onomatopeoia for absent-minded'
ʔoθa 'song'
noxa 'rice bran'
joxa 'floor'

xo'ja 'hut'
θoga 'blame'
boθaN 'peony'
'joha 'tour days'
'onagu 'girl'
ʔosagi 'rabbit'
kora'i 'eating'
mora 'village'

The actual number of relevant lexical items is over one hundred and ten.

Against these examples, we do find some words in the shape of CuCa. For example:

ʔura 'heart'
cuma 'wife'
huna- 'boat-'
'jura'jura 'onomatopeoia for swaying'

kusa 'grass'
huka 'deep'
murasaki 'purple'

The number of items in this shape is around

thirty, which might seem excessive, until we realize that the source of these words in most cases, we can presume to be Japanese. Observe that amongst the thirty items, only two words are found to correspond to Japanese words having /o/, and the rest correspond to /u/. Consequently, the actual number of items which might be native Ymt and in the shape of CuCa is much smaller.

We have observed above the same shared synchronic phonological tendency in Ymt and Ong. There can now be no doubt that this tendency in Ymt too, is also the consequence of the sound change PA *u > o / _Ca which must have been implemented, hence, in the time of Proto-Ymt-Ong (or Proto-Yamatoson).

By clarifying this point now, we can connect Ymt with Ong, and thus PA, in preparation for our next task, which is the continuing reclassification of Osada's extensive data.

In the following subsections, we will examine the lexical items classified by Shibata (1984). To begin each section, I will set up tables in which we can observe the compared pairs of OJ and Ymt words and, along with them, the Ong and reconstructed PA words. The numbers in the right hand columns show the relevant serial numbers from our master lexical list.

7.1.3.3. Osada's OJ o_1 and Ymt counterparts arranged by Shibata

Shibata picks up and compares twenty-five pairs from Osada (1977) involving OJ o_1 (Table 703).

In this section, I will demonstrate that around half of the twenty-five cases presenting Ymt o are in fact genuine evidence of OJ o_1, and hence, come from PA *o (*-o). The other half I will show to be ascribable to lexical borrowing, (i.e. from Jap o), with the resultant o caused by the sound change now formulated as PA *u > o / _Ca in Ymt (or in Proto-Ymt-Ong).

7.1.3.3.1 Ymt o from PA *u > o / _Ca

Let us examine first the cases which can be attributed to the above cited sound change.

At first glance, we find three cases from our reconstructed PA words which provide definite evidence for OJ o_1. These are (67), (71), and (84). From the PA words available, we know that the Ymt o's in (67) xogaθara, (71) θora, (83) 'jo'wa(sa) and (84) 'jonaha were *u's at the time of PA.

Table 703: OJ o_1 and relevant correspondences

OJ	Ymt	Ong	PA	No
ko$_1$	-xo	-	-	-
ko$_1$gatana	xogaθana	-	*kugatana	67
ko$_1$mura	xomura	-	*kubura	68
neko$_1$	nexo-	-	-	69
mi$_1$jako$_1$	mi'jaxo-	-	INV	1
to$_1$nari	θonari	-	INV	2
to$_1$ne	θone-	tuni(ja)	(*t_në)	70
to$_1$ra	θora	(cf.Naon tora)	*tura	71
ato$_1$ ~ ato$_2$	ʔaθo	ato	*ato	72
tuto$_1$	cïto	-	-	-
no$_2$rito$_1$	noriθo	nurito	INV	3
mi$_1$nato$_1$	mjaaθo	-	*minjato	73
jado$_1$	'jado	jado	*jado	75
jado$_1$	'jado	jado	*jado	74
kado$_1$	xado	kado	*kado	76
tuno$_1$	cïno	(cf. Naon tsino)	*tsïno	77
sino$_1$	sino-	-	-	-
mo$_1$ mo$_1$	momo	momo	*momo	78
Fukoro$_1$	hukuro	(Fukuro<L>)	*pukkur_	79
so$_1$	-so	so	*so	80
so$_1$ra	sora-	(sora<L>)	INV	81
iso$_1$	ʔisojo-	iʃo	*iʃo	82
jo$_1$wa	'jo'wa(sa)	ju(ʒi)wa_	*juwa-	83
jo$_1$naka	'jonaha	jonaha	*junaha	84
majo$_1$	ma'jo	(maju<L>)	*maju	85

As for Ymt θonari (2) 'next door' and sora (81) 'sky', the PA words were not available. In the case of (2) (OJ to,nari), our data collected words from only three dialects, and one of those was suggested as a loan word from Japanese tonari 'id'. These three reflexes are Sib tunar, Nas tonari<L>, and San (so)tonari. With only two possible native words, we are unable to recover the proto-form (moreover, the San form appears to me to be also a loan from Japanese). Nor are we able to say if PA had a word for this object. In this respect, I rather suspect the designation of Ymt θonari as native Ymt. However, as we have no firm evidence for this suspicion, we must leave this case for further study. Still, we can be quite confident in saying that the PA form, if it existed, would have been *tu-. Consider the initial syllable of the Sib word beginning tu-. To reconstruct PA *o, we must have a set of compared MdAm reflexes with o throughout (cf. 4.4.1). In this case, we must attribute the /o/ in Ymt θ onari to PA *u.

As with the case of Ymt θonari, we are not able to conclusively decide whether or not Ymt sora (81) is a native word or borrowed from Japanese sora. In MdAm, as far at least as our seven dialects are concerned, the widespread term for 'sky' is [tĩn], which is perhaps cognate with Sino-Japanese ten 'firmament'. If this is so, we must reckon that the time of borrowing would have been at the latest, the 15th century, when the 'Goon'honyaku'

(FN.3) was first written. The text attests this word as [tjɔn] 'id' (FN.4). If [tĩn] was borrowed from MdJ it should have had the shape [ten]; cf. MdJ [ten] /ten/.

Considering this view, and also the fact that my field work survey did not collect any words in the shape of [sora] (cf. Ong sora<L>) or anything similar, I shall presume that Ymt sora- is not native Ymt either. If, by a rare chance, it was in fact a PA word, presumably *sora, then Ymt sora is another example of PA *u > o / _Ca.

7.1.3.3.2 Ymt o resulting from lexical borrowing

In this section, we will attempt to exclude some cases from Table 703 as possible loan words. Let us first look at some words in the table which, if from Japanese, seem to provide examples for OJ -o_1 :: Ymt -o (and :: PA *-o).

Refer to our master list for the case of (1) OJ mi_1 $jako_1$ :: Ymt mi'jaxo-, (3) OJ no_2rito_1 :: Ymt noriθo, and (69) OJ $neko_1$ :: Ymt nexo-.

My own impression about the word for 'capital' (1), formed as I surveyed the dialects in the Amami

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Footnote 3. cf. the Korean text, 'Goon'honyaku'.
Footnote 4. The notations are by Tawada 1982.

Islands, was that the people were rather unfamiliar with the word miyako. Indeed, our data reflects this. I therefore feel that Ymt mi'jaxo- is a loan word too coming from MdJ mijako 'id'. Even supposing PA had a word for 'capital' as a direct ancestor for Sib mijaku and this Ymt mi'jaxo, we must assume that the word-final vowel was *u, not *o. Observe the correspondence patterns of MdA reflexes for PA *o (cf. 4.4.1). The Sib reflex is u.

For the word for 'Shinto prayer' (3), our data shows Ong nurito, Yoa nurito, and San norito<L>. We did not attempt to reconstruct the PA word because this case did not meet our conditions for reconstruction (4.2.2), having only two reliable dialectal forms. However, observe the shape of those two reliable forms for Ong and Yoa. They force us, apart from the insufficiency in the number of dialectal forms required for reconstruction, to assume that their proto-form was *nurito; cf. OJ no$_2$rito$_1$. Taking this argument into consideration, and also San norito, which our informant claimed was Japanese, we can assume that Ymt noriθo is also Japanese. Refer to the correspondence patterns of the MdAm reflexes for PA *u (cf. 4.4.3). When the patterns consisting of mostly /u/ plus one or two /o/'s were observed, we ascribed this /o/ to Japanese (cf. 4.4.3.3). If Ymt had indeed retained our inferred PA *nurito, it should have done so in the shape of nuriθo.

OJ word (69) neko$_1$ 'cat' no longer has a cognate counterpart in the Amami dialects. The word for

'cat' is now almost everywhere in the shape of [maja]. As far as our data is concerned, no dialect shows a word similar to [neko]. It is therefore highly likely that the source of Ymt nexo is Japanese neko 'id'.

We shall now examine some other loan cases Shibata listed as examples for his formulation OJ -o_1- :: Ymt -o- (a part of his OJ o_1 :: Ymt o).

Observe first, from our master list, the Amami words for (68) OJ $\underline{ko_1}$mura, and find that they are all in the shape of kubura with the exception of San hubura. The proto-form is *kubura. To this PA word, we find that Jap komura 'id' corresponds. The Ymt word xomura and Jap word resemble one another in every segment except for the initial consonants. Moreover, we can find sufficient cases for a sound corresondence Jap k :: Ymt x (except in _u, where Jap k :: Ymt k); e.g. (76) MdJ kado 'corner' vs. Ymt xado 'gateway'.

For the case of (70) OJ $\underline{to_1}$ne :: Ymt $\underline{\theta o}$ne_, refer to our argument in 7.1.3.4.2. With reference to the case of (173) 'stony land' (cf OJ $\underline{so_2}$ne), we can suggest that the Amami words in (70) are possibly from the Kagoshima dialect.

7.1.3.3.3 Ymt o as evidence for OJ $o_{/}$

In the previous sections, we attempted to exclude some cases used by Shibata 1984 to exemplify his (suspect) sound law OJ $o_{/}$ :: Ymt o regardless of position. We have also excluded cases in which Ymt o's from sources other than PA seemed to substantiate OJ -o :: Ymt -o < PA *o.

By doing this, we at last see those cases which do in fact contain o's as putative evidence of OJ $-o_{/}$. We can tabulate these cases in Table 704 as follows:

Table 704. Reclassified Ymt cases as evidence for OJ $-o_{/}$

	OJ	Ymt	PA
67	ko$_{/}$	-xo	-
72	ato$_{/}$ ~ato$_{*}$	ʔaθo	*ato
	tuto$_{/}$	cïto	-
74	jado$_{/}$	'jado	*jado
75	jado$_{/}$	'jado	*jado
76	kado$_{/}$	xado	*kado
77	tuno$_{/}$	cïno	*tsïno
	sino$_{/}$	sino	-
78	mo$_{/}$ mo$_{/}$	momo	*momo
79	Fukuro$_{/}$	hukuro	(*pukkur_)
82	iso$_{/}$	ʔisjo	*iʃo
85	majo$_{/}$ ~ (maju) (FN.5)	ma'jo	*maju
80	so$_{/}$	-so	*so

Note that Ymt hukuro 'suck' in (79) could be a loan word from Jap Fukuro 'id'.

The mo- in Ymt momo 'thigh' in (78) is a retention of the *mo- in PA *momo. Remember that this PA *mo- is perhaps due to a PA phonological constraint where PA *u and *o do not co-occur in the same word. Therefore the PA *mo- could previously have been *mu- (cf. 221f).

As for the monosyllabic cases, we observe some unpredictability in the correspondences between OJ and PA; i.e. some cases show OJ Co_1 :: PA *Co and others OJ Co_1 :: PA *Cu (cf. 6.1) However, consider that this unpredictability is found almost always where OJ o_1 is concerned; i.e. PA *≠Co≠ is normally found to correspond to OJ ≠Co_1≠, not ≠Co_2≠ or ≠Co≠. In addition, PA *≠Cu≠ is found in the case of OJ ≠Co_1≠ if PA ≠Co≠ does not correspond to it, and almost exclusively in the cases of OJ ≠Co_2≠ and ≠Co≠. From this fact, we can still conclude that some monosyllabic cases with o are evidence for OJ o_1.

Observe our master list for the case of (85) where PA *maju 'cocoon' is reconstructed. With reference to the OJ doublet $majo_1$ ~ maju 'id' we should reconstruct doublets for PA too. What we find in our data is that amongst the seven dialects, only Nas has retained PA *majo. In the other dialects we find PA *maju (except Ong maju<L>).

Footnote 5. The form in parenthesis has been added by the writer. In OJ, a doublet pair is attested; cf JBKDJ.

There is no doubt but that Nas majo is from PA and not from Japanese. Japanese has maju 'id' only. In a like manner, Ymt ma'jo is definitely from PA too. Therefore the -jo in Ymt ma'jo is evidence for -jo$_{1}$ in OJ majo$_{1}$.

7.1.3.3.4 'Exceptions' to Shibata's OJ o$_{1}$ :: Ymt o

In the previous sections, we examined some cases to exclude them (for a variety of reasons) from the set of compared pairs Shibata gives for OJ o$_{1}$. Let us reiterate that the cases we have excluded were those which misled Shibata to the mistaken formulation OJ -o$_{1}$- :: Ymt -o-, which we have now, hence, disproved.

The cases we are going to examine in this section were classified by Shibata as 'exceptions' to the above formulation. This was because they showed the correspondence OJ o$_{1}$ :: Ymt u .

However, in our reclassification, we shall expect to find that those cases which he labels exceptions, have Ymt u as a reflex of PA *u. We shall be able to reclassify them as examples of our OJ -o$_{1}$- :: PA *-u- (or Ymt -u- < PA *-u.

Observe Shibata's 'exceptions' in Table 705:

Table 705. 'Exceptions' to Shibata's OJ o$_{/}$ :: Ymt o

OJ	Ymt	Ong	PA	No.
ko$_{/}$ 'powder, flour'	xuu	ku	*ku	138
ko$_{/}$ 'bamboo basket'	-ku	ku	*-kku	140
ko$_{/}$ 'small-'	xu-	ku	INV	139
ko$_{/}$ 'thick'	xu'i(sa)	-	INV	137
ko$_{/}$si 'to cross over'	-xusi	ku(ti)	*ku_-	141
mo$_{/}$ko$_{/}$ 'son-in-law'	muhu	muhu	(*m_h_)	142b
Fako$_{/}$ 'box'	-	-	*pakku	143
to$_{/}$ 'gate'	-du	-	INV	144
tuto$_{/}$me$_{2}$ 'to endeavour'	'cītumī	tsītumī	(*tsīt_m-)	145
to$_{/}$zi 'housewife'	θuzi	tuzi	*tuʒi	146
to$_{/}$gi$_{/}$ 'to grind'	tugi	tugi	*tug-	147
θodo$_{/}$ 'processing time'	hudu	-	-	-
mo$_{/}$ko$_{/}$ 'son-in-law'	muhu	muhu	(*m_h_)	142a
siro$_{/}$ 'white'	siru	siru(sa)	*sirju	21
kuro$_{/}$ 'black'	kuru	kuru(sa)	*k$^{?}$uru	148
kuro$_{/}$kane 'iron'	kuruxani	-	-	-
o$_{2}$mo$_{2}$siro$_{/}$ 'interesting'	ʔomosiru(sa)	omosiru(sa)	(*omoʃir_-)	149
suso$_{/}$ 'skirting'	susu	sīso	*s_so	150
jo$_{/}$bi$_{/}$jo$_{2}$se 'calling'	'jubi'jusī	-	-	-
jo$_{/}$ 'night'	'juu	ju	INV	151
jo$_{/}$ru 'night'	'juru	juru	*juru	152
jo$_{/}$ruFi$_{/}$ru 'day'	'juruhiru	-hiru	*-piru	153

This table, as can be seen, calls for some

relevant PA words which are unfortunately irrecoverable. However, observe that the available PA vowels all have *u (except (150)) corresponding to OJ o_1. It is highly unlikely that the irrecoverable PA words had *o in the relevant position. The grounds for this supposition are that in every case, except for Ong sïso (150), both the Ymt and Ong words have u. Our historical formulation for Amami tells us that PA *o resulted in a correspondence pattern consisting in general of MdAm o throughout (cf. 4.4.4.1).

Based upon this observation, we will reclassify the following cases as examples for Shibata's OJ $-o_1-$ :: Ymt -u- (< PA *-u-) and our Corr. 2.

	OJ		Ymt	PA
145	$tuto_1me_2$	::	cïtumï	(*tsït_m-)
146	to_1zi_1	::	tuzi	*tuzi
147	to_1gi_1	::	tugi	*tug-
X	$jo_1bi_1jo_2se$	::	'jubi'jusï	-
152	jo_1ru	::	'juru	*juru
153	jo_1ruFi_1ru	::	'juruhiru	(*-piru)
141	ko_1si	::	-xusi	*ku_-
142	mo_1ko	::	muhu	(*m_h_)

As we discussed in 7.1.3.3.3, where OJ o_1 in monosyllabic words is concerned, the correspondences to PA, and hence, in Ymt, are not predictable. In other words, we

find either PA *o or *u (Ymt o or u) corresponding to OJ o_1. Shibata classifies those cases where OJ $\neq Co_1 \neq$ :: Ymt $\neq Cu \neq$ as 'exceptions'. Note, however, that the unpredictability is exclusively related to OJ $\neq Co_1 \neq$; viz. for OJ $\neq Co_2 \neq$ and $\neq Co \neq$, the correspondences are predictably PA $*\neq Cu \neq$ and Ymt $\neq Cu \neq$.

Considering this fact, we should reclassify the monosyllabic cases in Table 705 as examples of our OJ $\neq Co_1 \neq$ :: PA $*\neq Co \neq$ or $*\neq Cu \neq$ (:: Ymt $\neq Co \neq$ or $\neq Cu \neq$). For the relevant cases, I simply quote the numbers and the OJ forms (where available); i.e. (138) ko_1, (140) ko_1, (139) ko_1, (137) ko_1, (144) to_1, and (151) jo_1.

Now we can examine possible exceptions for both Shibata and our own comparison. Observe the following correspondences (note (150) as an example of our Corr. 1).

Table 706. Possible exceptions

	OJ	Ymt	PA
142b	$mo_1 ko_1$~ muko$_1$	muhu	(*m_h_)
143	Fako$_1$	haku	*pakku
	Fodo$_1$	hudu	-
21	siro$_1$	siru	*sirju
148	kuro$_1$	kuru	*k$^{?}$uru
	kuro$_1$kane	kuruxani	-
149	$o_{(2)}mo_2$ siro$_1$	?omosiru(sa)	(*omo∫ir_)
150	suso$_1$	susu	*s_so

In fact, we find doublets in OJ for 'son-in-law' (142); i.e. OJ muko ~ $mo_{/}ko_{/}$. This doublet is obviously caused by the well-known phonological alternation of u and o in OJ (cf.2.2.2). Though we cannot be certain which A/B-type the -ko of OJ muko is, it was probably $-ko_{/}$ rather than $-ko_{2}$ at the time of OJ. This is because, in OJ, u and o_{2} did not co-occur in the same morpheme. The doublets, therefore, were in fact, perhaps OJ $*muko_{/}$ ~ $mo_{/}$ $ko_{/}$.

We notice, if we look at our master list, that the modern Amami words for 'son-in-law' (142) divide into two groups, according to their shape:

Group-u	Group-o
Ong muhu	Sib muhoo
Nas muhu	Sho muho ~ moho
	Yen moho
	San moho

Supposing this division to have resulted from the fact that OJ had doublets, we are very much tempted to reconstruct PA *muhu and *moho (FN.6) from Group-u and Group-o respectively. If this is the case, when we return

---

Footnote 6. Remember that, as a synchronic phonological constraint, Sib often has the u-o combination as well as o-o, whereas our other dialects have o-o only (cf. 3.3.2)

to the Ymt form muhu, we now find it inappropriate to compare (Table 706), OJ mo$_{/}$ ko$_{/}$ with Ymt muhu. The appropriate comparison is rather OJ *muko$_{/}$ :: Ymt muhu.

So far, the comparison still stands as an exception to Shibata's OJ -o$_{/}$ :: Ymt -o (< PA *-o) and our Corr. 1.

Let us now remember, however, two issues related to the historical aspects of OJ.

Firstly, it was in the Pre-OJ period when PR split off from Japanese (cf. 3.1.3). Hattori 1959, using the glottochronological approach, reckons the time of the division to have been around the 4th century AD (cf. 3.1.1).

Secondly, we know that there was a sound change during the period of OJ, where o$_{2}$ was becoming o$_{/}$. For instance, kuso$_{2}$ 'personal name' attested in both 610 AD and 702 AD, had become kuso$_{/}$ by 720 (FN.7) as attested then and afterwards (cf. Chapter Seven, FN.2).

What is suggested by the above mentioned facts is that it is possible that exceptions such as that found in Table 706 are due to the vowel change o$_{2}$ > o$_{/}$ which was in progress after PR split off from Japanese. On the other hand, we ought not to universally attribute all the exceptions in the table to this change. However, I will now discuss two other cases which may well be related to this historical development.

Footnote 7. This case, substantiating CuCo$_{2}$> CuCo$_{/}$, has traditionally been attributed to labial attraction (cf. Takeuchi (1976).

OJ siro$_{1}$ (21) and kuro$_{1}$ (148), for 'white' and 'black' respectively - interestingly enough a pair of the two very basic notions of colour - both show the Ymt correspondence u.

Can we hypothesize the changes Pre OJ *siro$_{2}$ > siro$_{1}$, and Pre-OJ *kuro$_{2}$ > OJ kuro$_{1}$?

There is an important fact pertaining to these two OJ words. According to the JBKDJ, both words have doublet counterparts as sira 'white' and kurasi 'dark' (cf. kuro$_{1}$si 'black').

The importance of this lies in the fact that in OJ it was 'o$_{2}$' which often created doublets by its alternation with 'a'. For instance, ita ~ ito$_{2}$ 'very'; sa ~ so$_{2}$ 'that'; yo$_{2}$rasi ~ yo$_{2}$ro$_{2}$si 'good'; kata ~ ko$_{2}$to$_{2}$ 'word; thing' etc. (cf. Ōno 1953, 1974)

For OJ muko$_{1}$ ~ mo$_{1}$ko$_{1}$, which we discussed a little earlier, the JBKDJ also suggests an etymological link with OJ muka 'standing opposite'.

OJ kuro$_{1}$kane (Table 706) is without doubt kuro$_{1}$ 'black' + kane 'metal', and thus should be treated as in 148 kuro$_{1}$ ~ kurasi. The JBKDJ says that OJ omo$_{2}$siro$_{1}$ is interpreted as omo + siro in the Kogojui text. In fact, in poem 3791 of the Man'yoshu text, it is written as '面' + '白' and means 'white'.

For OJ Fako$_{1}$, Fodo$_{1}$, and 150 suso$_{1}$ (Table 706), we do not find any evidence to suggest that the -o$_{1}$'s came from Pre-OJ *-o$_{2}$. Therefore, we will treat the

correspondences involving them as exceptions to Shibata's OJ -$o_{/}$:: Ymt -o (< PA *-o) and our Corr 1.

7.1.3.3.5 Summary - reclassifications of $o_{/}$

In the previous sections, we have examined what are called 'exceptions' by Shibata 1984. Note that numerically the 'exceptions' exceed the 'examples' as listed by Shibata.

However, we have succeeded in reclassifying many of these 'exceptions' into examples for our newly formulated correspondences. We can summarize these reclassifications as follows, with the cases represented only by their OJ forms:

Cases reclassified as

examples of OJ -$o_{/}$- :: Ymt -u- (< PA *-u-):

141	ko$_{/}$si
142	mo$_{/}$ko
145	tuto$_{/}$me$_{2}$
146	to$_{/}$zi
147	to$_{/}$gi
152	jo$_{/}$ru
	jo$_{/}$bi$_{/}$jo$_{2}$se

Cases reclassified as

examples of OJ ≠Co$_1$≠ :: Ymt ≠Cu≠ (< PA *≠Cu≠)

138 ko$_1$

140 ko$_1$

151 jo$_1$

to$_1$

137 ko$_1$

139 ko$_1$

Finally, we have found some cases which are after all exceptions to our rules, though some of them may well be associated with Pre OJ *-o$_2$ > OJ *o$_1$.

Cases reclassified as

exception to OJ -o$_1$ :: Ymt -u (< PA *-u)

a) Ascribable to Pre OJ *-o$_2$ > OJ -o$_1$

142 muko$_1$ (mo$_1$ko$_1$ in Shibata)

21 siro$_1$

148 kuro$_1$

kuro$_1$kane

149 o$_{(2)}$mo$_2$siro$_1$

b) Not Ascribable to the above change

Fako$_1$

Fodo$_1$

150 suso$_1$

7.1.3.4 Shibata's OJ o_2 and Ymt counterparts

Shibata lists as many as 97 comparisons for OJ o_2. The actual number of lexical items involved is, however, much smaller than this, since OJ o_2 appears quite often in morphemes of the shape ---Co_2Co_2---; e.g. OJ ko_2no_2 'this' (88), $jo_2ro_2ko_2bu$ 'to become pleased' (102), etc.

The cases provided as examples for this sound correspondence - i.e. Shibata's OJ o_2 :: Ymt u (< PA *u) - are the least controversial since the list is devoid of 'examples' which are caused by lexical borrowing from Japanese. This is because, if borrowed from Japanese by Ymt, such words substantiate the correspondence OJ o_2 :: Ymt o. Some cases of this kind are in fact listed in Table 707 in one of the following sections, where they stand as exceptions to Shibata's OJ o_2 :: Ymt u (and also to our Corr. 4, OJ o_2 :: PA *u).

A problem in Shibata's data for OJ o_2 :: Ymt u is that here again, following the suggestion of the IKJ 1983 by Ōno, Shibata transcribes OJ o (non-A/B-type) as 'o_2'.

To deal with this problem, I presented the argument on OJ Øo in 7.1.2, and made my point of view explicit. Our conclusion was that there was no A/B contrast for the OJ non-A/B o; i.e. Øo was always o_2, while the other non-A/B o's were with Co_1.

The grounds that Ōno gives for retranscribing OJ

Co as Co_2 are that ...Co_2Co_2... is a rather frequent structure for OJ words. As we discussed in the section cited above, this logic is in itself invalid as a reason for deciding that $CoCo_2$, for instance, was *[Co_2Co_2].

Furthermore, according to our analysis on the non-A/B Co and Mori's (1981) 'theory of α- and β-group graphemes' (cf. 2.2.3.6), the claim of Ōno is entirely refuted.

However, it is fortunate for us that Shibata's data nevertheless includes some non-A/B cases. We will use these cases in support of our argument for our Corr. 5 and 6.

As I mentioned a little earlier, the compared pairs should be quite reliable evidence for OJ o_2 :: Ymt u (< PA *u).

Since the number of listed cases is so large, I will select twenty of them (those for which PA words are available) and reclassify them in Table 707 below.

7.1.3.4.1 'Exceptions' to Shibata's OJ o_2:: Ymt u (<PA *u)

The 'exceptions' that Shibata 1984 enumerates add up to fewer than fifty. I have found, however, that they are ascribable to various different causes, which I will present in the following subsections.

Table 707. Examples of Shibata's OJ o_2 :: Ymt u (<PA *u) and our Corr 4

Our No.	OJ	Ymt	PA
90	ko$_2$re	xuri	*kurɨ
43	ko$_2$me$_2$	xumɨ	*kumɨ
106	nago$_2$ri	naguri	*naguri
107	to$_2$	θu	*tu
7	to$_2$ki$_1$	θuki	*tuki
9	to$_2$si	θusi	*tuʃi
10	Fi$_1$ to$_2$	cju(u)	*tʃu
123	no$_2$mi$_1$	numi	*num-
19	no$_2$ri	-nuri	*nuri
128	Fi$_1$ ro$_2$	hiru(sa)	*pirju
132	jo$_2$	'ju	*ju
133	jo$_2$se	'jusɨ	*jus-
136	jo$_2$tu	'juucɨ	*juutsɨ
87	ko$_2$to$_2$si	xuθusi	*kutuʃi
92	ko$_2$zo$_2$	xuzu	*kuzu
102	jo$_2$ro$_2$ko$_2$bi	'jurukubi	*juruku_-
117	mo$_2$to$_2$	mutu	*mutu

7.1.3.4.1.1 Supposed 'exceptions' to Shibata's OJ o_2:: Ymt u due to sound change specific to Proto-Ymt

In an earlier section (7.1.3.4.1), we formulated

the sound change PA *u > o / _Ca in Ymt. We did this with reference to the same sound change in Ong, by establishing the logic that this sound change was of Proto-Ymt-Ong.

We now find that this sound change again plays a role in Shibata's classifications to produce some supposed exceptions to his OJ o_2 :: Ymt u (<PA *u).

Observe first the following cases picked up from Shibata's data, which are classified by him as 'exceptions' to the above sound correspondence:

Table 708. Supposed 'exceptions' to Shibata's OJ o_2 :: Ymt u - 1

Our No.	OJ	Ymt	PA
156	ko$_2$taFe$_2$	xoθa'je	INV
158a	ko$_2$mo$_2$ri	xomari	(*g_m_r-)
161	nogo$_2$Fi$_1$	noga'i (<*nogo'i)	*nuga-
162	to$_2$ga	θoga	*tuga
	to$_2$game$_2$	θogami	-
163	to$_2$mari	θomari	(*t_mar-)
158b	ko$_2$mo$_2$ri	xomari	(*g_m_r-)
174	jo$_2$ka	'joxa-	INV
175	jo$_2$riaFi$_1$	'jora'i	*j_r_

It is unfortunate that we have only two PA words available for comparison here. However, they nevertheless provide us with firm evidence that the Ymt o observed in

the list is due to an innovation of Ymt: i.e PA *u > o / _Ca.

We ought to be aware, however, that if a loan word (or words) which came from Japanese after the OJ period mingles with cognates which are inherited words from Proto-JR, they will be difficult to identify. This is because in the present context, the phonological shape of the Japanese word is identical with that of the native Ymt word. For example, I strongly suspect that Ymt 'joxa (174), with a morphological structure abnormal for Amami but common in Kyushu, is borrowed from a Kyushu dialect. Consider some Kyushu adjectives of the same structure; e.g. [joka] 'good', [o:ka] 'many', [amaka] 'sweet', [ʃekaraʃika] 'disturbing', etc.

7.1.3.4.1.2 Supposed 'exceptions' to Shibata's OJ o_2 :: Ymt u caused by lexical borrowing

Along with the loan case Ymt 'joxa discussed in the immediately preceding section, we must eliminate some Ymt words from the list as possible loan words from Japanese.

Table 709. Supposed exceptions to Shibata's OJ o_2 :: Ymt u - 2

Our No.	OJ	Ymt	PA
90	ko_2re	xore	*kurï
154	$ko_2no_2ko_2ro_2$	xonogoro	INV
157	ko_2no_2Fa	-xonoha	*kïnpa
159	ko_2to_2	xoθo	INV
168	nusubi$_1$ to_2	nusïdo	INV
172	no_2ri	noro	*nor-
3	no_2rito$_1$	noriθo	INV
173	so_2ne	-sjoone	INV

For (90) Ymt xore 'this', we would expect, if it is a native word, the shape to be xurï. See also Jap kore 'id'.

For (154) Ymt xonogoro 'recently', see Jap konogoro 'id'. Observe the -g- in both forms. Also refer to our master list; viz. (9) , our only examples are Yen konogoro<L?> and San honogoro.

PA *kïnpa 'leaf' (157), reconstructed from modern words with a shape identical to it (e.g. Sho kïnFa, Ong kïnha, San hïnpa, etc.) explicitly shows that Ymt -xonoha 'id' is from Jap konoha 'id'.

For (159) , Ymt xoθo 'J harp', refer to our main list, where we find Nas koto<L> 'id', and Yoa koto<L?> 'id' only.

For (168), Ymt nusïdo 'thief', compare OJ nusubi$_1$-

to_2 and MdJ nusuto [nwswto] ~ nusutto ~ nusudo 'id'.

San (3) norito 'Shinto prayer' is probably a loan word from Jap norito 'id', whereas Ong nurito and Yoa nurito are probably cognate with OJ no_2 $rito_1$ (cf. our Corr. 4 and 1). Based on this view I conclude that Ymt 3 noriθo is also from Jap norito.

For (172) Ymt noro 'declare', see Jap noro 'id'. It can not be cognate with OJ no_2ri.

The Amami words collected for (173) 'stony land' are possibly borrowed from one of the Kyushu dialects, Kagoshima [sone]. We consider the PA form for this item to be invalid because of the extreme irregularity amongst our dialects. In fact, Ymt -sjoone is semantically much closer to its Kagoshima form.

7.1.3.4.1.3 Supposed 'exceptions' to Shibata's OJ o_2::

Ymt u which are examples for Corr. 3.

Shibata obviously fails to reach the sound correspondence formulated as our Corr. 3; viz. OJ o_2 :: PA *o in PA *(C)oCo. Observe that the Ymt o in Table 710 is an unchanged reflex of PA *o found for words in the shape of *(C)oCo.

Table 710. Supposed 'exceptions' to Shibata's OJ o_2 :: Ymt u - 3

Our No.	OJ	Ymt	PA
-	ko$_2$ro$_2$	xoro	-
155	ko$_2$ko$_2$ro$_2$	xohoro	*kokoro
160	no$_2$ko$_2$ri	nohori	*nohor-
164	to$_2$mo$_2$	θomo	*tomo
165	to$_2$ko$_2$ro$_2$	θoro	*tokoro
166	to$_2$no$_2$	θono-	*tono
167	to$_2$mo$_2$	θomo	*tomo
-	tamo$_2$to$_2$	θamoθo	-

7.1.3.4.1.4 Summary - remaining exceptions

In the preceding subsections we have, by re-analysing the correspondence in the light of our PA counterparts, reclassified all but six of Shibata's 'exceptions' to OJ o_2 :: Ymt u (< PA *u).

We recognize these remaining items as genuine exceptions to OJ o_2 :: Ymt u (<PA *u).

Table 711. Remaining exceptions to Shibata's OJ o_2 :: Ymt u

Our No.	OJ	Ymt	PA
-	jado$_2$ri 'lodging'	'jadori	-
171	no$_2$ 'field'	-no	*no
22	mi$_1$no$_2$ 'straw raincoat'	mjoo	*minjo
(Ref 136)	jo$_2$ 'four'	'jo	(136. *juutsi)
132	jo$_2$ 'lifetime'	'jo	*ju
-	jo$_2$ri 'from'	'joN	-

7.1.4 Summary - OJ o_1/o_2

In the preceding subsections, we have relied upon our reconstructed PA to alternately reject, modify and confirm the existing classifications of various reflexes of the OJ o_1/o_2 contrast.

We have established a new sound correspondence, disentangled OJ non-A/B o from OJ o_2, and for the first time brought a series of historical linguistic considerations to bear on what has previously been a somewhat poorly illuminated area of OJ phonology.

7.2 PA contributions to the OJ i_1/i_2 contrast

In Chapter Six we concluded that, with the exception of OJ ki_2 'tree' (25), the following correspondence was in evidence:

OJ		PA
i_1, i_2, i	::	*i

In the next section I will look elsewhere for more solid evidence to support (Pre OJ $*o_2i$ >) OJ i_2 :: PA *i.

7.2.1 Evidence to support (Pre-OJ $*o_2i$ >) OJ i_2 :: PA *i

7.2.2.1 Setting up a model illustration

Before attempting a search for supporting evidence for the formulation '$*o_2i$-type' OJ i_2 :: PA *i, we first need to define our methodological approach. This is because, as we now know, our data does not provide us with direct examples from within PA (other than (25) $*ki_2$ 'tree'), and so our examination must dig more deeply for evidence.

First let us refer back to the illustration in Figure 601 provided in 6.2.1. From it we can extract the following relationship between Pre-OJ (Proto-JR), MdJ and PA:

Figure 701

MdJ		Pre-OJ		PA
ki	<	*ko$_2$i 'tree'	>	*kï

Secondly, let us consider an issue which carries an element which will be important for the methodological framework which we are now attempting to assemble.

It is a fact, found by Hattori 1978, that some of the Japanese dialects which are non-standard and non-Ryukyuan have [ke] for 'tree' instead of, or as well as, [ki] 'id'.

Hattori finds, in fact, even in OJ, ke 'tree'. It is, however, found specifically in the uta ('songs, poems') of non-standard localities, and also in place names not given in Hattori (1978) in Gengo Oct. 1978, 101f .

Note that this fact has a parallel in that the *o$_2$i in Pre-OJ *ko$_2$i 'tree' has resulted in PA *ï, which is the reflex of Pre-OJ *ai and *ia. These two Pre-OJ diphthongs have become MdJ e through OJ e$_1$ and e$_2$ respectively. (FN.9). Trace this in Figure 601.

Let us now fit this fact into the illustration given in Figure 701. We now obtain the following:

Footnote 9. It now seems to be generally acceptable to use the OJ local word ke 'tree' and MdJ local [ke] 'id' to justify the hypothetical reconstruction of PR *e for the 'PX' slot in Figure 601.

Figure 702.

MdJ	Pre-OJ	PA
standard ki local ke	< (FN.10) *ko_2i 'tree'	> *kï

Finally, I would like to add another element into the above illustration: the MdAm reflexes of PA *kï 'tree'. Observe in our master list that the MdAm words coming from PA *kï (25) are all in the shape of kï, except San hïï and Sib kïï. However, the vocalic elements are the same.

Now we see in the following model illustration the complete historical relationships:

Figure 703. Model illustration for OJ ki

Mod J	Pre OJ	PA	Mod Am
standard ki local ke	< *ko_2i	> *kï	> kï (kïï, hïï)

Footnote 10. It would be groundless to claim Pre-OJ *ko_2i 'tree' as the source for both MdJ ki and ke. Therefore, the use of '<' between MdJ and Pre-OJ in the diagram is conditional. However, what is more important, and will be essential for us in our later examination, is the fact that we have two different forms for 'tree' in MdJ against Pre-OJ *ko_2i and PA *kï.

7.2.1.2 Substantiating the model illustration

Ōno (1953) in a well-known work, attempts to reconstruct Pre-OJ shapes for different OJ conjugatory forms which vary by conjugation categories. He makes this attempt on the basis of the diphthongal origins of OJ vowels (cf.2.2.3.6).

In this work, Ōno hypothesizes the following development for the noun-suspensive form of verbs belonging to the conjugatory category called 'kami-nidan' (literally 'upper bigrade'). Let us consider the word for 'to wake up'.

Pre OJ		OJ
*oko_2 + i	>	oki_2

For the Pre-OJ element *oko_2-, read the 'conclusive' form of the verb for 'to wake up' as a transitive version; i.e. OJ oko_2su, perhaps as oko_2 (stem) + su (cf. such Japanese verbs as otosu 'to fall [vt]', hanasu 'to speak', jurusu 'to forgive' etc).

According to Ōno's hypothesis, the above case for 'waking' is another example of *o_2i-type i_2.

In fact, if the noun-suspensive forms of the OJ 'kami-nidan' verbs are found in the shape of (C)oCi_2, it is generally possible to apply Ōno's hypothesis. However, it

would be preferable to find the, in this case, conclusive form of the transitive versions of the 'kami-nidan' verbs (FN.11) in the shape of (C)oCo + su as a justification for the existence of the element oCo_2- for Pre-OJ *oCo_2ti.

Now, coming back to the OJ word oki_2 'to wake up', I would like to demonstrate how this word and its related words would fit in, and thus support our hypothetical formulation suggested by the case of OJ ki_2 'tree' (cf. Diagram 703).

We have already seen Ōno's hypothetical Pre-OJ form for OJ oki 'to wake up'; i.e. *oko_2i. Modern standard Japanese has /oki/. On the other hand, in Chikuzen (Fukuoka, Kyushu), Shikoku, and Nagasaki (Kyushu), we find the word okerakoboshi for 'tumbler' (cf. ZKHJ by Tōjō, 1951). The equivalent word for this object in standard Japanese is okiagarikoboshi. Considering the meanings of the words, it is of no doubt that both oke- and oki- are cognate to OJ oki_2.

As our master list shows, the PA word for 'to wake up' (24) is irrecoverable. However, five modern dialects show this particular relevant reflex. Observe the following Amami words collected in 24:

Sib	Sho	Ong	Nas	Yen	Yoa	San
uhī	uhī(jun)	hwī(ru)	hīr(jun)	hu(n)	hī(n)	uu(n)

Footnote 11. Note that the transitive versions of the 'kami-nidan' verbs normally belong to the 'Yodan' conjugation (litera lly 'quarter-grade').

Note that all the dialects except Yen and San have /-ĭ-/. San /-u-/ is probably the result of assimilation in the vowel sequence.

Also, note that the traditional view of Ryukyuan verbs is that they consist of an element equivalent to the noun-suspensive form of Japanese verbs plus another element to indicate the tense of the verb.

For instance, Ok katʃun 'to write' = katʃi + un (< *wori). The element katʃi in this verb and Jap kaki 'writing [n/s form]' show a regular correspondence between each phonological segment.

This traditional view can be easily justified by the fact that the OJ n/s form hypothesized as having an element coming from Pre OJ *o_2i corresponds to its Ryukyuan counterpart having the vowel corresponding to MdJ /e/. Against this, we find the element associated with Pre-OJ *ui corresponding to MdJ /i/. Observe this as follows:

Md		Pre-OJ n/s form		Yoa
oki	<	*oko$_2$i	>	hĭ(n)
'waking up'		'waking up'		'to wake up'
urami	<	*uramui	>	urami
'grudge [n]'		'grudge [v] [n]		'to grudge'

The different vowels in the two Yoa forms (ĭ and i) definitely reflect the different Pre-OJ diphthongs (*o_2i and *ui). We have confirmation, then, of the view Yoa hĭ-

and urami are both from the Pre-OJ n/s forms.

Having justified the traditional view on the Ryukyuan verbs discussed above, we now return to our present argument on the Amami forms for 'to wake up' (24). We can now accept and confirm that the /-ï-/ found in the five dialects is a reflex of Pre-OJ *o_2i.

As for the PA vowel for the /-ï-/ in the five modern dialects, *-ï is the most probable reconstruction.

We have so far prepared all the essential elements necessary to substantiate the formulation set up in Figure 703. Let us fill in the slots and observe the complete illustration, as shown in Figure 704 below:

Figure 704. Complete interrelationship for OJ oki$_2$

MdJ		Pre-OJ		PA		MdAm
standard oki dialectal oke-	<	*oko$_2$i	>	*kï	>	uhï- hwï- hï- (hu-, uu-)

In terms of the relevant vowels, OJ ki$_2$ 'tree' and oki$_2$ 'to wake up [n/s]' are exactly parallel.

In fact, further examination shows that there are more cases of OJ n/s verb forms acribable to the Pre-OJ *o_2i etymology. These are, however, cases which, as mentioned earlier, we must examine without the relevant PA form, but rather with such MdYmt evidence as is available

from the AHBJ dictionary by Osada et al, (1977).

In an earlier discussion (cf. 7.1.3.2) we considered the reliability of Ymt by relating it to Ong by means of a particular sound change shared by the two dialects; i.e. PA *u > o / _Ca (it should, perhaps, be noted that Ymt, considered as a dialect in its own right, would not, if used as the eighth dialect for our reconstruction, add any changes to our reconstructed PA).

Bearing this in mind, observe the cases illustrated in Figure 705 below. The given dialectal words are from the ZHJ by Tōjō (1951). The PA forms given in parentheses are generalized from the sound correspondence between OJ and PA, and also from the given Ymt words.

7.2.1.3 Summary

In 7.2.1.1 we set up an historical model for OJ ki_2 'tree' (Figure 703), and in the following sections, we have examined some parallel cases (Figures 704 and 705).

Now we are justified in setting up the following:

MdJ		OJ		Pre-OJ		PA		Mod-Am
std. i dlt. e	<	i_2	<	$*o_2i$	>	*ɪ	>	ɪ
std. i dlt. i	<	i_2	<	*ui	>	*i	>	i

We present the above as additional support for the formulation in Figure 602 and for Hattori's original correspondence.

Figure 705. Some other cases of OJ i_z of the $*o_2i$ type

MdJ	Pre-OJ	PA	MdAm (Ymt)
a)			
standard oi 'id'	< *ojo$_2$i >	(*uĩ?)	> wĩ
Yamanashi & Shizuoka oeru 'to become broken, to become old'	'getting old' (cf. OJ ojo$_2$si [a] ' old')	(*wĩ?)	'id'
b)			
standard ori 'id'	< *oro$_2$i >	(*urĩ)	> urĩ
Nagasaki ore + bosi 'coming down + star = shooting star'	'going/coming down, to descend' (cf OJ oro$_2$su 'to put lower [vt]')		'id'
c)			
standard oti 'id'	< *oto$_2$i >	(*utĩ)	> uθĩ
Iki, Isushima ote + gisi 'falling + coast = cliff'	'falling down' (cf. OJ oto$_2$su 'to drop [vt]')		'id'

7.3 PA correspondences to the OJ e_1 /e_2 contrast

In Chapter Six we concluded that PA evidence for the OJ A/B contrast was unavailable for e_1/e_2, and reached the following correspondence (remember that *ɨ and *ë are allophones):

OJ		PA
e_1, e_2, e	::	*ë, *ɨ
(e	::	*i)

Shibata 1984, however, sets up a formulation which exceeds ours. He concludes that OJ e_1 is evidenced by MdAm i (which I take to be the reflex of our PA *i).

In the following sub-sections, therefore, I reconsider his claim with reference to our formulation provided above, and to relevant data collected by the writer which has not been included in the master list.

7.3.1 MdAm i as evidence for OJ e_1 in Shibata 1984

In Shibata (1984), the following comparison is provided (FN.12):

Footnote 12. Shibata and Mitsuishi (1979) make the same claim.

OJ		Am
ike$_{/}$	::	ʔiki
'go [imp]'		'id'

OJ ike$_{/}$ is the imperative form of the Yo-dan ('quarter-grade') verb iku 'to go'. In fact, the word ike is not attested, as Shibata himself warns. Therefore the existence of this word is inferred. However, in this case, we do not need to wait for discussion and conclusion in order to justify its existence. Taking into consideration the fundamental nature of the word iku 'to go' , and also the great frequency of OJ Yo-dan verbs, we can postulate that it must have existed.

According to our formulation, set up in 6.3.1, PA should have *ikɨ̈ ~ *ikë for 'go [imp]'. Indeed, in the relevant map provided by Shibata (1984), we find modern forms having /-i/ in areas around Nase (bear in mind, however, that our OJ e$_{/}$ :: PA *ɨ̈ ~ *ë is inferred).

It is true, however, as Shibata claims, that most of the localities his map show the form in the shape of iki.

In the next section, I would like to address this problem by attempting to prove that OJ e$_{/}$ :: Am i is merely an exception to our formulation. It was caused by a sound change which took place in or before the time of PA.

7.3.2 Progressive vowel assimilation in PA

In the first of three expeditions of field work surveys undertaken for this dissertation, I collected a significant amount of data in addition to the 261 lexical items found in our master list.

These supplementary items consist of verbs in different conjugatory forms, particularly including the imperative forms of the yo-dan verbs. The verb forms chosen for inclusion in the present research are both those which carry -e_1 and those cases of e which are thought by many researchers to have come from *e_1 when found in the imperative form (FN. 13).

Thanks to the cognates of on the imperative forms of some OJ verbs collected in the first survey, I find, despite the large number of blank slots, that it is nevertheless possible to prove that OJ e_1 :: Am i is attributable to an innovation in or before PA.

Observe the imperative forms in the following table:

Footnote 13. Many of these imperative forms were, as a matter of fact, collected twice; once in this first survey, and again in the third survey, which was specifically designed (after initial analysis had pinpointed this as an area of particular interest) to collect much needed data related to the e_1/e_2 contrast. The untimely (10 April, 1989) theft of the cassette tapes for the third survey has proved to be a significant loss to our present research.

Table 712. Imperative forms of some OJ yo-dan verbs

Gloss	OJ	Sib	Sho	Nas	Yoa
'listen'	kike$_{1}$	kikii	kikii	kikju	kiki
'play'	asobe$_{2}$			asïbï	asïbï
'rest'	jasume$_{1}$	jasïmï		jasïmï	jasïmï
'put lower'	orose$_{2(1)}$	urusï		urusï	urusï
'stand'	tate$_{(1)}$			tatjï	tatï
'cut'	kire$_{1(1)}$			kirï	k$^{?}$iri

Observe that in all the dialects except Nas, we find imperative forms ending in /-i/ (/-ii/ in Sib and Sho), and that the /-i/ is confined to the environment iC_. Note, for example, Yoa kiki 'listen', and k$^{?}$iri 'cut'. As far as the above data are concerned, Nas does not have the imperative element as /-i/ even in the environment iC_. The Nas element is /-ï/, except in kikju 'listen'.

This is a parallel phenomenon to the one found in OJ ike 'go [imp]' in Shibata (1984). Nas and surrounding areas show ?ikï 'id').

This synchronic fact, found both in our necessarily incomplete data and in Shibata (1984), is observed to be consistent with the 'wave theory', i.e. it has spread from a central point. I therefore posit that the unification of the imperative elements in Nas is due to a late innovation which took place after Nas split from Proto-ONYY (5.2).

Moreover, we can hypothesize the relevant PA imperative forms of these words on the basis of our experience in reconstruction. PA should have had the following forms, to which I will arbitrarily assign numbers as follows:

301	*kiki	'listen'
302	*asïbï	'play'
303	*jasïmï	'rest'
304	*urusï	'put lower'
305	*tatï	'stand'
306	*k$^{?}$iri	'cut'

We can also reconstruct the relevant form for Shibata's test case:

307	*iki	'go'

Perhaps the innovation in Nas should be depicted as an analogical change based on the model of the generally observed imperative element -ï.

It is clear now that PA had two alternative imperative elements, i.e. *-i and *-ï. This alternation is due to the synchronic constraint in the vocalism of PA, i.e. *-ï ---> *i / *iC_.

As noted earlier in Footnote 13, I did in fact complete the collection of the desired data for the imperative forms of MdAm in my third field work survey.

Though the data is no longer available, I was able, during the actual process of gathering the data, to confirm in my own mind more cases which could have led us to the reconstruction of more PA forms substantiating this phonotactic constraint.

I am therefore fully convinced that evidence for the existence of this PA vocalism - a progressive vowel assimilation - does exist, and can and will be reconfirmed by future research.

We should, then, assume that sometime in the Pre-PA period the imperative element was once *-ï throughout. Thus we find, for example, the following comparisons:

	OJ	Pre PA
301	kike$_{1}$	*kikï
302	asobe$_{1}$	*asïbï
305	tate$_{(1)}$	*tatï
307	ike$_{1}$	*ikï

Note that we do not have any evidence to contradict the proposition that the PA imperative element *-i was ever in any shape other than *-ï in this Pre-PA stage.

In the above examination, we have demonstrated that the MdAm imperative element -i is a reflex of PA *-i, which came in its turn from the earlier *-ï.

Therefore, Shibata's claim (1984) that OJ e_1 :: Am i (based on the case of OJ ike_1 'go' :: Am iki 'id') must be reconsidered.

First, however, we must anticipate a possible objection, and will attempt to set it aside in the next section.

7.3.3 Setting aside OJ e_2 :: *i/iC_

In Table 608B, we find the following comparison:

37 OJ ime_2 :: PA *imï

In this comparison, we find first that the phonotactic constraint, which we formulated in the above section, does not apply (PA *imï). Secondly, this irregularity seems to show a relationship to OJ e_2.

We find in our data only this one case showing the correspondence OJ e_2 :: PA *ï in the environment iC_. If, however, we were to find more, the examples for this correspondence would lead us to set up the following formulation:

OJ		PA	
e_1, e	::	*i	/ iC_
e_2	::	*ï	

Although our data do not provide us with enough positive evidence to confirm the above formulation, it does not provide any counterevidence either.

Let us look, therefore, at data collected from the AHBJ by Osada et al (1977). I strongly submit, on the basis of the examination given below, that OJ e_2 :: PA *ï, found in the case of (37) 'dream' is caused by the PA consonant *m rather than by OJ e_2.

First of all, observe the following Ymt items, listed with the corresponding OJ words. They are a series of subjunctive and imperative forms of the same verbs of the yo-dan category. The glosses given are for their conclusive forms.

Gloss	Subjunctive		Imperative	
	OJ	Ymt	OJ	Ymt
'to enter'	ire - ::	ʔiri-	ire ::	ʔiri
'to pull'	pi_1 ke_2 ::	hiki-	$pike_1$ ::	hiki
'to go'	ike_2 ::	ʔiki-	ike_2 ::	iki

In the above data, we see OJ e_1, e_2, and e all corresponding to Ymt /i/ in the environment iC_. Furthermore, this correspondence pattern holds true even when words from other historical stages of Japanese are examined. For example, MdJ ikedori 'to capture alive' ::

Ymt ʔixiduri, MJ to MdJ mise 'shop' :: Ymt misi, etc.

Indeed, we can find more cases in the AHBJ exemplifying this correspondence in this particular environment. In addition, I have not found any cases which contradict the correspondence, except those few for which an appropriate phonological cause is also readily evident.

But it is important that, amongst those few exceptions, we have the following case:

MJ		Ymt
kime(ru)	::	kimi
'to scold'		'id'

When we observe this exception alongside the one cited in the beginning of this section (given again below), the importance of the existence of the consonant m can be focused upon:

OJ		PA
37 ime$_2$	::	imi
'dream		'id'

On the basis of the above examination, I would like to claim that PA *imi is a residue of an earlier sound change *iCi > PA *iCi caused by the consonant *m, and that

MdAm imï reflects this. In addition, it may be that Ymt kimï 'to scold' also reflects this, if OJ had an ancestral word for MJ kime 'id' in the shape of ki$_{?}$me$_{?}$ (the A/B-types for the ki and me have not yet been reconstructed).

Therefore, we will not consider the *ï of PA *imï as evidence for the e_2 of OJ ime$_2$.

7.3.4 Summary - PA and OJ e_1/e_2

In the previous sections related to the examination of the OJ e_1/e_2 contrast and the relevant Amami correspondences, we first set up the following formulation:

OJ		PA
e_1, e_2, e	::	*ë, *ï
(e	::	*i)

This was set up solely on the basis of our data (6.3).

This formulation denotes that PA does not provide - nor should any of the MdAm dialects provide - any phonological contrast matching OJ e_1/e_2.

In the sections which followed, we examined, and proved as inaccurate, Shibata's (1984) claim of OJ e_1 :: Am i. This we did by demonstrating the existence of a

progressive vowel harmony in PA (7.3.2).

Furthermore, we have anticipated and refuted the possible claim for the case of PA *imï 'dream' as evidence for OJ e_2 (cf OJ ime 'id').

I would like to conclude these sections, therefore, by reconfirming the validity of our formulation presented in 7.3 and reiterated above.

Chapter Eight

OUTLOOK

8.1 Summary of this work

The present work has divided itself naturally into three parts, each of which reflects a different aspect of the work as a whole.

In Chapters One through Three I have tried to provide a much needed overview to past study of the OJ A/B distinction and its relationship to the Modern Ryukyu dialects, including both a comparison of researchers and a highlighting of specific areas which still call for clarification.

In Chapters Four and Five we left behind all thought of past research and the relationship of various Modern languages with their various historical stages, and focused in on the task of applying the methods of European historical linguistic reconstruction to, for the first time, the recognition of certain aspects of the phonology of PA.

That accomplished, we began, in Chapters Six and Seven, the detailed task of comparing the information contained in PA with the most closely related previous work, most especially that of Shibata (1984) and Osada (1977 in Shibata (1984). To that end we have revised the

conclusions of the above work, and, most importantly, highlighted the dependability and exactness made possible by the use of this methodology.

8.2 Areas for future study

Because the chief characteristic of the present work has been to break new ground in the methodology applied to the Ryukyu dialects, we have necessarily concentrated on our topic, the OJ A/B distinction, and on the relevant correspondences between OJ and PA, and on such previous closely related work as was available. One can not help, of course, but uncover a wealth of additional related areas of study, some of which I would like to present below.

8.2.1 OJ Non-A/B Co: PA *o or *u?

As a general correspondence, we have found that OJ Non-A/B o corresponds to PA *u. However, we also note from our findings that it is also generally OJ o_2 which corresponds to PA *u. Although we find that OJ o corresponds to PA *o in special environments (7 cases), we see that this is phonemically conditioned, and so we put it aside in favour of OJ o :: PA *u.

OJ Non-A/B Øo is, according to our analysis, phonetically related to OJ o_2 (they share the same MC rhyme final as shown in 2.2.4.1). On the other hand, OJ Co is related to OJ o_1. But what our sound correspondences between OJ and PA in Chapter Six (Table 603A) show is that in general Non-A/B OJ o is PA *u (and sometimes to PA *o; refer to Table 603B for OJ o : PA *o).

We have here isolated a contradiction, which can be illustrated as follows:

MC rhyme final	OJ	PA
X	o_1	*o
	Co	
Y	Øo	*u
	o_2	

As we see, OJ Non-A/B Co shares the MC rhyme final value with OJ o_1, but also corresponds to our PA *u. What this signifies is an area for future study.

8.2.2 The alternation of u and o

Matsumoto (1984) as we detailed in 2.2.2, presents the traditional view that OJ u and OJ o_1 are very close in terms of phonetic value, whereas u and o_2 are, again in terms of phonetic value, further apart. The

traditional view is that OJ o_2 is phonetically closer to OJ a.

From our data we find, however, that OJ o_2 corresponds to PA *u, and that OJ o_1 corresponds to *o. This conclusion is similar to the results obtained by Shibata (1984) in his reconstruction of the OJ vowel system using correspondences between OJ and Sib. Matsumoto (1984) points out this problem, and criticizes Shibata because of it. This criticism applies also to our findings.

In fact, I agree with Matsumoto's objections. Further research is needed to explain what it was that happened to cause this discrepancy.

8.3 Diphthongs

We did not reconstruct some segments because of the irregularity of the modern reflexes. I noted, however, that quite often these irrecoverable segments corresponded with MdJ diphthongs. Since we specifically avoided using MdJ as a point of reference in our reconstruction, relying solely on our collected MdAm data, this point was outside the bounds of the present work, and we did not reconstruct any diphthongs for PA. However, there seems to be evidence that PA diphthongs existed, and therefore we leave the topic for future study.

8.4 PA accent

As noted in 4.1.10, we did not attempt to reconstruct a PA accent, since it was far from our central topic. Our results do not show any sound changes which might reasonably be supposed to have been caused by accent, and so we can say that it was always segmental environment and not accent which conditioned a sound change.

However, the setting up of a PA accent system must be attempted in the future.

8.5 Korean texts for the Shuri dialects

Modern Okinawa and Modern Amami have completely different values corresponding to MdJ /e/. But the values of the Korean orthographers for the relevant vowel found in the Shuri texts seem to show possible evidence for the OJ A/B distinction. A comparison with PA would be a fruitful task.

8.6 OJ e_1/e_2 contrast and MdAm i

Finally, still left for future study is the area of a possible MdAm correspondence to the OJ e_1/e_2 contrast, which I believe may very well exist despite the failure of

all previous attempts to find it (cf. 2.2.3).

In addition to the area for study marked out in Chapter Six, our reconstruction of ï from our dialects implies the following phonetic detail:

ï ---> [wi] / k,m_
---> [i] / elsewhere

This parallels the fact that the OJ e_1 /e_2 contrast is found in OJ after k, g, p, b, and m. I believe that this will prove to be the most fruitful area of research for the evidence required.

Non-A/B Øe shares a MC rhyme final value with OJ e_2, whereas Non-A/B Ce shares a rhyme final value with e_1. Although we have only one case for Non-A/B Øe, the division is interesting enough to mark this as an area for serious future study.

In the Omoro Saushi, (Hokama 1982ed) finds that word-inital e (Øe) is transcribed with the symbol from the Japanese hirakana alphabet which is used for /we/, wheareas the symbol for /e/ is used for Ce. This is reflected in the vocalic difference between the Amami dialects (cf. Table 205).

I believe, since there was an orthographic symbol for simple /e/, and yet we find /we/, that it is possible that OJ Øe was not simply [e], and may be reflected by OJ e_2 as shown in Table 205.

This orthographic use of /we/ coincides with Hashmoto (1950) and Arisaka (1957) (cf. 2.2.3.1.1), and Mori (1981) (cf. 2.2.3.4), who concentrated on finding an element before the main vowel. Since it is possible to relate this to MdAm ɨ as detailed above, this point would seem to call for further research.

8.7 Further notes on the PJR vowel system

In Chapter Four, we reconstructed PA *u_A and *u_B , from the evidence found in Nas, and *i_A and *i_B from Sib and Sho. In Chapters Six and Seven, where the OJ A/B issue was discussed in relation to the vowels, this PA A/B contrast was not taken into consideration because it was not immediately relevant to this specific issue and could surely have added unnecessary complexity to our argument.

In this final section, I shall therefore discuss the possibility of setting up more PJR vowels than we have attempted to do in section 6.6.1.

8.7.1 More vowels for PJR

The PJR vowels tentatively reconstructed in section 6.6.1 are as follows:

*o_1	*i_1	*e_1	*u	*a
*o_2	*i_2	*e_2		
(*o)	(*i)	(*e)		

In this reconstruction, we ignored the PA A/B contrast; ie. PA *i_A/*i_B, and *u_A/*u_B.

We also disregarded the fact that in Nas, we find /i/ and /ï/, both of which we ascribed to PA *i , treating Nas /i/ as an exception (4.4.1.3.2).

In the following subsections, I will examine the relationship between these Nas reflexes and the PA *i_A /*i_B contrast.

I will then discuss how the PA *i_A/*i_B, *u_A/*u_B, and Nas i/ï issues could affect the OJR vowel system set up tentatively in section 6.6.1.

8.7.1.1 PA *i_A/*i_B and Nas i/ï

The reconstruction of the PA *i_A/*i_B contrast is based on the reflexes in Sib and Sho; viz. the appearance of ∅ and i is decisive (4.4.1.3). Note that this contrast is confined to the word-final position only. For example (9)Sho tur 'bird' vs. Nas turi 'id', and PA *turi 'id'.

Observe now the Nas i/ï issue relating to the PA *i.

Our view on this issue presented in 4.4.1 was

that PA *ʃi, *tʃi, and *ʒi have become Nas sï (ʃï in one item), tsï, and zï respectively, with three items substantiating PA *ʃi > Nas ʃi, which we treated as exceptions.

Let us then find out the word-final Nas i and ï cases, and observe them in relation to PA $*i_A$ and $*i_B$.

PA $*i_B$		Nas i	PA $*i_B$		Nas ï
(4) *kuʃi$_B$	vs.	kuʃi	(60) *kïbuʃi$_B$	vs.	kïbusï
(87) *kutuʃi$_B$	vs.	kutuʃi	(232) *puʃi$_B$	vs.	hïʃï
(205) *këëʃi$_B$	vs.	këëʃi	(252) *mukaʃi$_B$	vs.	mukasï
			(124) *inj_tʃi$_B$	vs.	n$^{\text{ʔ}}$jɯutsï
PA $*i_A$		Nas ï	(146) *tuʒi$_B$	vs.	tïzï
(8) *tuʃi$_A$	vs.	tusï			
(325) *mutʃi$_A$	vs.	mutsï			

It would appear from these correspondences that the PA $*i_A/*i_B$ and Nas ʃi/sï contrasts represent two distinct issues.

8.7.1.2 PA $*i_A$/ i_B and OJ i_1/i_2

OJ i_1/i_2 contrast is the direct retention of PJR $*i_1/*i_2$ (6.6.1).

However, PA $*i_A/*i_B$ is not so.

Observe, taking the examples having the environment m_, that PA A/B and OJ 1/2 are different issues for i.

	OJ	PA		OJ	PA
(23)	no$_2$mi$_2$	*numi$_A$	(29)	kami$_2$	*kami$_B$
(200)	jumi$_1$	*jumi$_A$	(236)	momi$_1$	*mumi$_B$

8.7.1.3 PA *u$_A$/*u$_B$ and OJ o$_1$/o$_2$

Remember that the PA *u$_A$/*u$_B$ contrast has been reconstructed on the basis of the Nas reflex in the environment of _Ci (4.4.3.4). Therefore, this PA contrast can not be seen in word-final position.

Observe, in the following comparison that, here again, OJ o$_1$/o$_2$ and PA *u$_A$/*u$_B$ do not reflect the same contrast in the protolanguage.

	OJ	PA		OJ	PA
(142)	to$_1$gu	*tu$_A$g-	(141)	ko$_1$su	*ku$_B$_-
(112)	to$_2$mu	*tu$_A$mï	(90)	ko$_2$re	*ku$_B$rï

8.7.2 Outlook

In the above subsections, we have observed that OJ 1/2 and PA A/B contrasts are different issues: ie. the PA contrast can not be ascribed to the PJR 1/2 vowels which we have reconstructed on the basis of the OJ 1/2 contrast.

Nor did positing an A/B contrast for the set of PJR back vowels affect the results of our examinations attempted in Chapters Six and SEven.

Therefore, if we project all of the relevant OJ and PA contrasts into the proto-language, the PJR vowel system will have to be reconsidered as follows:

$*i_1$ $*i_2$	$*u_A$ $*u_B$
	$*o_{1A}$ $*o_{1B}$
$*e_1$ $*e_2$	$*o_{2A}$ $*o_{2B}$
$*a$	

To justify, or refute, this vowel system, and to know, hence, what the distinction of as many as eleven vowels suggests for the phonetic aspects, our data does not provide sufficient evidence. Therefore, we must leave this problem for future research.

The data underlying this study were , clearly, insufficient to reach firm conclusions about the phonological system of PJR. I hope to have shown, however,that systematic reconstruction from the present-day Amami dialects —— and by implication from Ryukyu as a whole —— provides important evidence for the prehistory of Japanese.

Appendix One: Master List

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
1	'capital'	mijaku	-	-	-	-	-	mijako<L?>	INV	mi$_1$jako$_1$	1
2	'next door'	tunar	-	-	tonari<L>	-	-	(so)tonari	INV	to$_1$nari	2
3	'Shinto prayer'	-	-	nurito	-	-	nurito	norito<L>	INV	no$_2$rito$_1$	3
4	'waste'	kUʃ	kuʃ ~ kuʃi	kuʃi	kuʃi	koʃi	kuʃi	huʃi	*kuʃi	ko$_2$si	4
5	'steaming basket'	-	kuʃiki	kaʃiki-	kaʃike	kaʃiki-	kaʃiki	kuʃsi	INV	ko$_2$siki	5
6	'impurity'	nīkkrī(rjun)	-	nīkkre-	-	nïgïre	nïguri	nïgïri	nï__r_	nigo$_2$ri	6
7	'time'	-duk ~ toki	-duk	tuki	tuki	tuki	toki	tuki	*tuki	to$_2$ki$_1$	7
8	'time, years'	tuʃii	tuʃi	tuʃi	tusï	-	toʃi	tuʃi	*tuʃi	to$_2$si	8
9	'bird'	tuur	tur	turi	turi	turi	tori	turi	*turi	to$_2$ri	9
10	'person'	tʃu ~ ttʃuu	tʃuu	ttʃu	ttʃuu	tʃu ~ ttʃu	ttʃu	tʃu	*tʃu	pi$_1$to$_2$	10
11	'spirit of the dead'	ttʃuu.dama	tʃuu.dama	ttʃudama	ttʃudama ~ ttʃuudama	tʃudama ~ ttʃudama	tʃuudama	tʃuuntamasii	*tʃ_dama	pi$_1$to$_2$dama	11
12	'husband'	wutu	wutuu	utu	wutu	wutu	wutu	wutu	*wutu	wopi$_1$to$_2$	12
13	'one'	tʔï(t)	tʔïï(t)	tʔïï(tsï)	ttïï(tsï)	tʔïï(tsï)	tʔïï(tʃï)	tʔïï(tsï)	*tʔïï	pi$_1$to$_2$	13
14	'one day'	ttʃui	tʃii	tʃui	ttʃui	-	tʃii	tʃii	*tʃui	pi$_1$to$_2$pi$_1$	14
15	'one year'	-	tʃutu(u)	tʃutuʃi	ttʃutusï	-	-	tʃuutuʃi	*tʃutuʃi	pi$_1$to$_2$to$_1$se	15
16	'three years'	mitʃuu	mitʃuu	mitʃuu	mitusï	miʃʃu	-	mituʃi	*mitʃ___	mi$_1$to$_2$se	16
17	'dance, jumping'	wudur	udur	wuduri	wuduri	wuduri	wuduri	wuduri	*wuduri	wodo$_2$ri	17

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
18	'paste'	nurii	-	nuri	nuri	nuri	nuri	nuri	*nuri	no_2ri	18
19	'laver'	nurii	nurii	nuri	nuri	nori	-	nuri	*nuri	no_2ri	19
20	'yesterday'	k$^{?}$injuu	kinjuu	k$^{?}$inu	-	kkinju	k$^{?}$inu	kinuu	*k$^{?}$inj_	ki_1no_2pu	20
21	'white'	ʃirju-	ʃirju	ʃiru-	sïru	ʃiru	ʃiru	ʃiru	*ʃirju	$siro_1$	21
22	'straw raincoat'	minjo ~ minjoo	minjo ~ minjoo	n$^{?}$jo	mmjo	njo	njo	njuu	*minjo	mi_1no_2	22
23	'chisel'	numi ~ numii	numi	numi	numi	nomi	nuu	num	*numi	no_2mi_2	23
24	'waking'	uhï	uhï(jun)	hwï(ru)	hïr(jun)	hu(n)	hï(n)	uu(n)	IRC	oki_2	24
25	'tree'	kïï	kï	kï	kï	kï	kï	hïï	*kï	ki_2	25
26	'fire'	-	-	-	-	matsï	-	-	INV	pi_2	26
27	'fruit'	mi	mii	mi	mi	mi	mi	mi	*mi	mi_2	27
28	'grudge'	-	uram	-urami<L?>	uram(ï)	urami	urami	uram(jun)	*urami	$urami_2$	28
29	'god'	kam- ~ kami	kam	kami	kami	kami	kami	kami	*kami	$kami_2$	29
30	'moon'	tïkii ~ udëk	tïk- ~ -dïki-	tsïki	tsïki	tsïki<L?>	tsïki	sïki	*tsïki	$tuki_2$	30
31	'reed'	wugi	wugii	wugi	wugi	wugi	wugi	wugi	*wugi	$wogi_2$	31
32	'J cedar'	sïgi	sïgii	sïgi	sïgi	sïïgi	sïgi	sïgi	*sïgi	$sugi_2$	32
33	'clover'	hagi	-	-	-	-	hagi<L>	hagi<L?>	INV	$pagi_2$	33
34	'winnower'	-	-	hiri	hiri	hir(u)	-	-	*pir_	pi_2	34

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
35	'darkness'	-jam	-jam	-jam	-jan ~ jami	jan-	jami-<L>	jaa-	*jam	$jami_2$	35
36	'pond'	ikee ~ ike	-	ihe	-	ike	ihi	ike<L?>	*i__	ike_2	36
37	'dream'	imï	imïï	imï	ïmï	imï	imï	j$^{?}$uu	*imï	ime_2	37
38	'surface'	uï	ïï	uïï	ï ~ ïï	u	ï	w$^{?}$ï	IRC	upe_2	38
39	'plum tree'	-	-	ume<L>	-	-	-	ume<L>	INV	ume_2	39
40	'shadow'	kagëë	kagëë	kagï	kagë	kagë	kagë	hagë	*kagë	$kage_2$	40
41	'pot'	kamï	-gam ~ kamï	kamï	kamï	kamï	kamï	hau	*kamï	$kame_2$	41
42	'tortoise'	kamï	kamï	kamï	kamï	kamï	kamï	hau	*kamï	$kame_2$	42
43	'rice'	kumï	kumï	-	kïmï	kumï	-	huu	*kumï	ko_2me_2	43
44	'J liquor'	sïhë	se(ggwa)	sëhë	sëhë	sïe	sï(h)ë	see	*sëhë	$sake_2$	44
45	'bamboo'	dëhëë	dïhëë	dëhë	dëhë	dëhë	dë(h)ë	dehe	*dëhë	$take_2$	45
46	'mountain'	tëhëë ~ -dëhëë	tïhëë	tëhë	tëhë	-	-	dehe	*tëhë	$take_2$	46
47	'sake'	-	-	-	-	-	-	-	INV	$tame_2$	47
48	'claw'	t$^{?}$ïmï	t$^{?}$ïmïï	tsïmï	tsïmï	tsïmï	tsïmï	tsïï	*tsïmï	$tume_2$	48
49	'seedling'	nei	nëë	nai	n$^{?}$jë	nae	nae	nai	IRC	$nape_2$	49
50	'cooking pot'	nabëë	nabïï	nabï	nabï	nabë	nabï	nabï	*nabë	$nabe_2$	50
51	'paint brush'	-	-	-	-	hake<L>	-	hake<L?>	INV	$pake_2$	51

. Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	NO.
'fly'	hïe ~ hwei	Fëë	Fë	hïï	hë	hai	pai	INV	$pape_2$	52
'beans'	mamï	mamï	mamï	mamï	mame	mamï	mau	*mamï	$mame_2$	53
'serious'	-	-	-	-	-	-	-	INV	$mame_2$	54
'seaweed'	-	wakame<L>	wakame<L>	-	-	wakame	wahame<L>	INV	$wakame_2$	55
'pail'	wuhï	wuhï	wuhï	wuhï	wuhë	uhu	-	*wuhë	$woke_2$	56
'hair'	kïï	kïï	kï	kï	-	kï	-	*kï	ke_2	57
'container'	-kï	-kïï	-kï	kï	-ke	-	-	*kï	ke_2	58
'sign'	-	-	-	-	-	-	-	INV	ke_2	59
'smoke'	kïbuʃi	kïbuʃ	kïbuʃi	kïbïsï	kïbuʃi	kïbuʃi	hïbuʃi	*kïbuʃi	ke_2buri	60
'food receptacle'	-hi-	-hi- -hï-	hi	hï	-hi-	-	-	*p_	pe_2	61
'eye'	mï	mïï	mï	mï	mï	mï	mï	*mï	me_2	62
'bud'	-	-	mï	mï	-mï	mï	mï	*mï	me_2	63
'beloved'	më-	-	më-	mï-	më-	-	-	*më-	me_2gusi	64
'circumference'	-	-	mïguri	mïguri	-	mïgïr(jïn)	muguri	*mïguri	me_2guri	65
'child'	kkwaa	kkwaa	kkwa	kkwa	kkwa	kkwa	kkwa	*kkwa	ko_1	66
'short sword'	kugatana	kugatanaa	-	-	-	kugatana	-	*kugatana	$ko_1gatana$	67
'calf'	kubura	kubura	kubura	kubura	kubura	kubura	hubura	*kubura	komura	68

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
69	'cat'	-	-	-	-	-	-	-	INV	neko$_1$	69
70	'public person'	tunëë-	tunī-	tunī-	tone-	tone-	tone	tone	*t_në	to$_1$ne	70
71	'tiger'	turaa	turaa	-	tura<L>	tora<L?>	tura	tura	*tura	to$_1$ra	71
72	'trace'	atoo	-	ato	ato	ato	-ato	ato	*ato	ato$_1$(ato$_2$)	72
73	'bay'	minjatUU	minjato	-	-	minato	minjato	minato<L>	*minjato	mi$_1$nato$_1$	73
74	'inn'	jado-<L>	-	jado	jado	jado	jado	jadU	*jado	jado$_1$	74
75	'door'	jadoo	jado	jado	jado	jado	jado	jadU	*jado	jado$_1$	75
76	'gateway'	kadoo	kado	kado	-	kadu	kado	kado	*kado	kado$_1$	76
77	'antler'	-	t$^{?}$īno	-	tsīno	tsīno	tsīno	-	*tsīno	tuno$_1$	77
78	'thigh'	mUmoo	mumo	momo	momo	momo-	momo-	moo-	*momo	mo$_1$mo$_1$	78
79	'bag, sack pouch'	hukkuru	hugur	Fukuro<L>	Fukuro	hokkoro	hukuro ~ hokoro	pukkuru	*pukkur_	pukuro$_1$	79
80	'hemp'	-so	-so	-so	-so	-so	-	-	*so	so$_1$	80
81	'sky'	-	-	sora<L>	-	-	-	-	INV	so$_1$ra	81
82	'beach'	iʃo	iʃo	iʃo	iso ~ iʃo	iʃo	iʃo	-	*iʃo	iso$_1$	82
83	'weak'	jua-	jua-	ju(zi)wa-	-	juwa-	-	juwa-	*juwa-	jo$_1$wa	83
84	'midnight'	junaha	junaha	jonaha	junaha	junaha	junaha	junaha	*junaha	jo$_1$naka	84
85	'cocoon'	man	maju	maju<L>	majo	maju	maju	maju	*maju	majo$_1$	85

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
86	'this-'	ku ~ kur	-	ku ~ kurï	-	-	-	-	INV	ko_1	86
87	'this year'	kutuʃ	kutuuʃ	-	kutuʃi	kutuʃi	kutuʃi<L>	hutuʃi	*kutuʃi	ko_2to_2si	87
88	'this-'	kun	kun	kun	kun-	kun-	un	un	*kun	ko_2no_2	88
89	'this world'	kun.ju	-	kun.ju	-	kun.ju	-	unju	*kun.ju	$ko_2no_2jo_2$	89
90	'this'	-	kuur	kurï	kurï	kurï	urï	urï	*kurï	ko_2re	90
91	'to row'	kug(juru)	ku(zii)	kug(i)	hug(jun)	kug(jun)	kŪg(i)	hug(jun)	*kug-	ko_2gu	91
92	'last year'	kuduu	kuduu	kuzu	kïzï	kuzu	kuzu	huzu	*kuzu	ko_2zo_2	92
93	'speech'	-	-	-	-	-	-	kutu	INV	ko_2to_2	93
94	'thing'	-	-	-	-	-	-	-	INV	ko_2to_2	94
95	'language'	kutuba	kutuba	kutuba	-	kutuba	-	-	*kutuba	ko_2to_2ba	95
96	'bull'	kïtïï	kutïuʃ	kutï	kïtï-	kote(kkwa) ~ kote(usikkwa)	kutë	kotousi	*k_t_	$ko_2to_2pi_1usi$	96
97	'liking'	konom-	-	kunumi	kono(dï)	-	-	konoi	*k_n_mi	$ko_2no_2mi_1$	97
98	—	-	-	-	-	-	-	-	INV	-	98
99	'congealing'	-gur	-guur	-guri	-gïri	-guri	-	-	*-guri	ko_2ri	99
100	'kill'	kuʃʃ(uu) ~ kurus(un)	kuʃʃ(un)	kuss(u)	kuttʃ(un)	-	kuttʃ(un)	kuruʃ(un)	*kutʃ	ko_2ro_2su	100
101	'voice'	kuii	kui	kui	kui	kui	kui	hui	*kui	ko_2we	101
102	'to become pleased'	jurukub-	-	juruku(dï)	jurukum(i)	jurukub(jun)	jurukum(i)	juruku(jun)	*juruku_-	$jo_2ro_2ko_2bu$	102

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
103	'horizontal'	juku	juku	juku	juku	joko	joko	joko	*j_k_	jo_2ko_2	103
104	'to wake'	-	uhu∫(un)	hīī(sī) hīī(∫i)	hīī ~	hu(suna)	hu∫(un)	uu∫(un)	*h_∫_	oko_2su	104
105	'bed'	tuk	tuuk	tuku	tīkī	toko	-	tuku	*tuku	to_2ko_2	105
106	'vestige'	nagur ~ naguur	nagur	nagur(ī)	naguri	-	naguri	naguri	*naguri	$nago_2ri$	106
107	'and'	tu	tu	tu	tu	-	-	tu	*tu	to_2	107
108	'to fly'	tu(dur)	tub(jun)	tub(uri)	tub(jun)	tub(jun)	tub(jun)	tub(jun)	*tub-	to_2bu	108
109	'tree top'	-	-	-	-	-	-	-	INV	to_2busa	109
110	'far'	tuu-	tuu-	tuu-	tuu-	tuu-	tuu-	tuu-	*tuu	to_2po	110
111	'pass by'	toori-	-	tuuri	turi ~ tuuri	toori<L?>	tuuri	tuuri	*tuuri	to_2pori	111
112	'to stop'	-	tumī(jun)	tumī(ri)	tīm(ī)	tīm(īri) ~ tum(īri)	-	-	*tumī	to_2mu	112
113	'fellow'	tungarjaa	tun(kana)	tungara	tungara	-	-	-	*tungara	to_2mo_2gara	113
114	'younger brother'	ututuu	utuutu	ututu	ututu	ututu	ututu	utuutu	*ututu	$oto_2pi_1to_2$	114
115	'to drop'	-	utuu(t∫i)	utu(t∫i)	utu(sī)	utu∫(an)	utu∫(an)	utu∫(un)	*utu∫-	oto_2su	115
116	'sound'	utUU	utu	utu	utu	utu	utu	utu	*utu	oto_2	116
117	'trunk'	mutu	mutu	mutu	mutu	moto<L?>	-	mutu	*mutu	mo_2to_2	117
118	'stagnation'	judu(dur)	judu(dun)	judumi	judumi	judu(dī)	judumi	judui	*judumi	$jo_2do_2mi_1$	118
119	'plover'	t∫izorja	t∫izorjaa	-t∫izorja	tsīzīrja	tidor(i)	-tizurja	tizurja	INV	$tido_2ri$	119

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
120	'J cypress'	hinok	hinok	hinuki	hinoki<L?>	hinoki<L>	hinukki	hinoki<L>	INV	$pi_1no_2ki_2$	120
121	'to ride'	nor	nu(tī)	nur(u)	nur(i)	no(otī)	nor(jun)	nor(jun)	*n_r-	no_2ru	121
122	'climbing'	nubuur(jur)	nubu(utī)	nubur(jun)	nuburi	noor(jun)	noor(in)	noor(jun)	*n_b_r-	no_2bori	122
123	'to drink'	num(juur)	nu(dīī)	num(un)	num(jun)	nUm(jun)	num(jun)	nu(jun)	*num-	no_2mu	123
124	'life'	injotʃ ~ injootʃ	inotʃ	n^{ʔ}jutʃi	n^{ʔ}juutsī	nutʃi	n^{ʔ}jutʃi	n^{ʔ}jutʃi	*inj_tʃi	ino_2ti	124
125	'to carry'	mu(tʃuur)	mu(ttsī)	mu(turi)	mī(tsī)	mutʃ(un)	muttʃ(un)	mutʃ(un)	*mutʃ-	mo_2tu	125
126	'thing'	mun	mon	mun	mun	mun	munu	mun	*mun	mo_2no_2	126
127	'talking together'	-mungatari	-	mungatare	mungatari	mungatare	mungatari	-	*mungatar_	$mo_2no_2gatari$	127
128	'wide'	hirju-	hirju-	hiru-	hiru-	hiru-	hiru-	piru-	*pirju	pi_1ro_2	128
129	'to lower'	-	uru(ti)	uru(sun)	uru(sī)	-	uruʃ(un)	uruʃ(un)	*uru_-	oro_2su	129
130	'to dye'	sīmī(rju)	-	sīmī(run)	sīmī(rjun)	-	sīmī	sīëun	*sīmī	so_2mu	130
131	'slow'	usso-	uso- ~ oso-	-	-	oso-	-	-	*oso	oso_2	131
132	'lifetime'	-	-	ju	ju	-	ju	ju	*ju	jo_2	132
133	'to bring together'	jUs(ī-)	-	jus(ī)	-	-	jus(īn)	-	*jus-	jo_2su	133
134	'to approach'	-	ju(tī)	-	jur(jun)	-	jur(jun)	jur(jun)	*jur-	jo_2su	134
135	'to count'	jum(juur)	jU(dī)	jum(un)	jum(jun)	-	jum(jun)	ju(jun)	*jum-	jo_2mu	135
136	'four'	-	jUUt	juutsī	juutsī	juttsī	juutsī	juutsī	*juutsī	jo_1tu	136

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
137	'thick'	-	-	-	-	ku	-	-	INV	ko/	137
138	'powder, flour'	ku-	koo	ku	ku	-	ku	pu	*ku	ko/	138
139	'small-'	-	-	-	-	-	-	-	INV	ko/	139
140	'bamboo basket'	-ku	-gu	ku	-ku	-ku ~ -kku	-	-	*-kku	ko/	140
141	'to cross over'	hu(irjuu) ~ ku(ite)	ku(jati)	ku(ti)	ku(sĩ)	kĩ(sĩ) ku(sĩ)	-	huʃ(un)	*ku_-	ko/su	141
142	'son-in-law'	muhoo	muho ~ moho	muhu	muhu	mono	-	moho	*m_h_	muko ~ mo/ko/	142
143	'box'	hak	Faak	-	hakku	hakʔu	haku	paku	*pakku	pako/	143
144	'gate'	-	-	tu	tu	-	to<L>	-	INV	to/	144
145	'to endeavour'	-	tsĩtom(ĩ)	tsĩtum(ĩ)	tsĩtĩm(ĩ)	sĩtĩm(ĩ ~ sĩtum(ĩ)	-	tsĩto(on)	*tsĩt_m-	tuto/mu	145
146	'housewife'	tuutʃ	tuutʃ	tuzi	tĩzĩ	tuʒi	tuʒi	tuʒi	*tuʒi	to/zi	146
147	'to grind'	tug(jur)	tug(ii)	tug(i)	tĩg(jĩ)	tug(jun)	tug(jun)	tug(jun)	*tug-	to/gu	147
148	'black'	kuru-	kuru-	kuru-	kuru-	kʔuro	kkuro	kkuru	*kʔuru	kuro/	148
149	'interesting'	-	umoʃire- ~ omoʃire-	omoʃiru-	omosĩrĩ-	omoʃiru-	omoʃiru-	ooʃiru-	*omoʃir_	omosiro/	149
150	'skirting'	susU	-	sĩso	sĩso	sĩso	susu	sĩso	*s_so	suso/	150
151	'night'	ju-	-	ju	-	-	-	-	INV	jo/	151
152	'night'	-	-	juru	-	juru	juru	juru	*juru	jo/ru	152
153	'day'	-hir	-hiru	-hiru	-hiru	-hiru	hiru	-piru	*piru	pi/ru	153

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
154	'recently'	-	-	-	-	konogoro<L?>	-	honogoro	INV	$ko_2no_2ko_2ro_2$	154
155	'mind'	kuhoro	kohoro	kukoro	kohoro	kooro	kooro	kooro	*kokoro	$ko_2ko_2ro_2$	155
156	'answer'	-	-	kotae	kutae-	kutae(ru)	kotae(ru)<L?>	kotae(ru)<L>)	INV	ko_2tape_2	156
157	'leaf'	kinhwa	kĩnFa	kĩnha	kĩnha	kĩnoha	kĩnha	hĩnpa	*kĩnpa	ko_2no_2pa	157
158	'to shut in'	kumor	-	gumur(i)	-gomar(i)	-gomar(i)	-	-	*g_m_r-	ko_2mo_2ru	158
159	'J harp'	-	-	-	koto<L>	-	koto<L?>	-	INV	ko_2to_2	159
160	'to remain'	noho(os)	noho(t∫aa)	noho(sĩ)	nohor(un)	noko(si)	nohor(i)	noor(jun)	*nokor-	no_2ko_2ru	160
161	'to wipe'	nugë(ë)	nuga(tĩ)	noga(u)	noga(i)	nuga(u)	nuga(i)	nuga(jun)	*nuga-	no_2go_2pu	161
162	'blame'	tugaa	-tuga	tuga ~ toga	tuga	tuga	tuga-	-	*tuga	to_2ga	162
163	'wharf'	-domar	tUma(tĩ)	toma(të)	-	-	tumari	-	*t_mar-	to_2mari	163
164	'stern'	tumoo	tomo	tomo	tomo	tomo	tomo	too	*tomo	to_2mo	164
165	'place'	-turo ~ tuhoro	toro ~ toroo	toro	doro	tokoro	tokoro	toro	*tokoro	$to_2ko_2ro_2$	165
166	'man's place'	-tuno- ~ tunoo-	-dono	tunu-	tono-	tono-	-	tono<L?>	*tono	to_2no_2	166
167	'friend'	tumu	tomo	-tomo	-tomo	-	tomo	-	*tomo	to_2mo_2	167
168	'thief'	nusĩdo	nusudo	nusĩdo	nusĩdo	nĩsĩdo	nusuto	nusĩdo ~ nusudo	INV	$nusubi_1to_2$	168
169	'sleeve'	tamuutu	tamotu	tamutu	tamutu	tamoto	-	tamutu	*tam_tu	$tamoto_2$	169
170	'to lodge at'	-	-	-	-	-	-	-	INV	$jado_2ru$	170

No.	Gloss	Sib	Sho	Ong	Nas	Yan	Yoa	San	PA	OJ	No.
171	'field'	-no	-	-no	-no	no-	no-	no<L?>	*no	no_2	171
172	'declare'	nur(o) ~ nor(o)	-	nur(u) ~ nor(o)	nor(o)	nor(o)<L?>	-	-	*nor-	no_2ru	172
173	'stony land'	sïnëë	sïne	sïnï	sone	sune ~ sone	sone	sone	INV	so_2ne	173
174	'good'	-	i(i) ~ ji(i)	-	-	-	-	i(i) ~ ji(i)	INV	jo_2ka	174
175	'gathering'	jurë ~ judë	juree	jore	jore	-	jurai	jurai	*j_r_	jo_2riapi	175
176	'fog'	k$^{\text{ʔ}}$ir	kiri	-	kiri<L>	kkiri	kiri-	kiri	*k$^{\text{ʔ}}$iri	ki_2ri	176
177	'shore'	kiʃi<L>	kiʃi	-	-	kiʃi<L?>	-	kiʃi	INV	ki_2si	177
178	'nehpew'	wui	ui	wui	wui	wui	woi	wui	*wui	$wopi_2$	178
179	'internal organs'	k$^{\text{ʔ}}$imu	k$^{\text{ʔ}}$imo	kkimu	kkimo	-	kkimo	kkjoo	*k$^{\text{ʔ}}$im_	ki_1mo_1	179
180	'wear'	-	kir	kkir(i)	kir(jun)	kkir(jun)	k$^{\text{ʔ}}$iri	k$^{\text{ʔ}}$irjun	*k$^{\text{ʔ}}$ir-	ki_1ru	180
181	'chrysan-themum'	kiku<L>	-	-	kiku	kiku	kiku<L?>	kiku<L?>	INV	kiku	181
182	'autumn'	akii	-	aki	aki	aki	akki	aki	*akki	aki_1	182
183	'inside'	uki	uki	uki	ukki	ukki	uki	uki	*ukki	oki_1	183
184	'barrier'	sëkki	sïki	-	(sakku)	-	-	seki	*sëkki	$seki_1$	184
185	'snow'	juk	juk ~ juhu	-	-	-	juki<L>	juki<L>	INV	$juki_1$	185
186	'upper jaw'	ak	-	agi	agi	-	-	ago ~ agu	*agi	agi_1	186
187	'nail'	k$^{\text{ʔ}}$uuk	k$^{\text{ʔ}}$uuk	kugi	-	k$^{\text{ʔ}}$ugi	kugi	kugi<L?>	*k$^{\text{ʔ}}$ugi	$kugi_1$	187

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
188	'braid'	himo-	himo<L?>	himo	-	-	himo<L?>	-	INV	pi,mo	188
189	'to enshrine a god'	juwë	juë	jowe	joë	joë	joë	joo	*j__ë	ipapi,	189
190	'shellfish'	-	-	-	-	-	-	-	INV	kapi,	190
191	'journey'	tap	tap	-	tabi<L>	tabi	tabi	tabi	*tabi	tabi,	191
192	'shining red'	-	-	njuë	njoo	njoo	njoë	njoo	*nj__	nipopi,	192
193	'J belt'	(k$^{?}$j)up	(k$^{?}$j)up	(kkj)ubi	ubi	obi	ubi	obi	*ubi	obi,	193
194	'J sake'	miik	miik	miki	mikki	(o)miki	-	miki	*mikki	mi,ki,	194
195	'cape'	-	-	-	-	-	-	misaki	INV	mi,saki,	195
196	'paper'	-	kap	kabi	kabi	kabi	kabi	kabi	*kabi	kami	196
197	'hair'	-	-	-	-	-	kami<L>	-	INV	kami,	197
198	'tear'	-	-	nada	nada	nada	naada	nada	*nada	nami,da	198
199	'ear'	-	mimi	min	min	min	min	min	*mimi	mi,mi,	199
200	'bow'	-	jumi	jumi	jumi	-	jumi	jun	*jumi	jumi,	200
201	'woman'	wunak	wunak	wunagu ~ onagu	wunagu(kkwa)	wunagu	onagu	wunagu	*wunagu	womi,na	201
202	'to cut'	k$^{?}$ir(jur)	ki(tii)	kir(i)	kir(u)	kir(jun)	kir(jun)	kir(jun)	*k$^{?}$ir-	ki,ru	202
203	'bruise'	k$^{?}$it	k$^{?}$it	kizï	kizï	kizï	kizï	kizï	*k$^{?}$izï	ki,zu	203
204	'today'	kjuu	kjuu	kïu	kjuu	kjuu	kju	huu	*kjuu	ke,pu	204

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
205	'turning over'	këë∫	këë∫	këë∫i	këë∫i	kë∫i	këë∫i	-	*këë∫i	kape/si	205
206	'capsized'	-	-	-	-	-	-	-	INV	kape/ri	206
207	'front'	mïë	mëë	më	më	mëë	më	mï	*mëë	mape/	207
208	'royal servant'	-bë	-	-	-	-	-	-	INV	be/	208
209	'evening'	jubë	-	jubï	jubï	jubë	jubï	jubï	*jubë	jupube/	209
210	'female'	-	më	mïï-	mï	mïë-	-	mï	*mëë	me/	210
211	'seeing, governing [hon]'	mi∫or(e)	mi∫or(e)	mi∫or(i-)	mi∫or(i)	mi∫or(e)	-	mi∫(ore)	*mi∫o	me/si	211
212	'suppression'	u∫ë-	usa(jun)	osa(tï)	osai	usa(jun)	osë-	ose-	*_s_	osape$_2$	212
213	'generally'	uhu-	-	-	-	-	-	-	INV	opo kata	213
214	'parent'	uja	uja	uja ~ oja	uja	oja	uja	uja	*uja	oja	214
215	'crying out'	urab(jur)	urab(jun)	-	urabi	-	-	-	*urab_	orabi/	215
216	'outside'	huka	huka-	-	huka	-	huka	puha	*puka	poka	216
217	'temporary grave'	mooja	mooja	-	muja-	-	-	-	*m_ja	moja	217
218	'governing'	-	-	-	usame	osame(ru)<L>	-	wusa(un)	INV	wosame$_2$	218
219	'end'	uwar	oar	owari<L?>	owari<L>	uwari	uwa(tan)	owari<L?>	INV	wo$_2$pari	219
220	'falling from heaven'	amore<L>	amore<L?>	amuro	amoro	amore-	amore	-	*amor_	amori	220
221	'blue, green'	oo-	oo-	oo~	oo-	-	ao	oo-	*oo	awo	221

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
222	'face'	kau ~ kao<L>	-	kao	kao	-	kao	kao<L?>	*kao	kapo	222
223	'admiration'	kam	-kam	kamo	-	-	-	-	*kam_	kamo	223
224	'boat pole'	soo	soo	so	so ~ soo	so	sso	sso	*so	sawo	224
225	'ten days'	tuuka	tuuka	tuuka	tuuka	tuuka	tuuka	tuuka	*tuuka	to_2woka	225
226	'defense'	mabur	mabur ~ nabur	maburi	maburi	maburi	mamor(in)	mamor(jun)	*maburi	mamori	226
227	'growing older'	-	-	-	u(utan)	-	-	u(tejaa)	INV	oi	227
228	'old man'	utt∫u	hutt∫uu	witt∫u	utt∫u	utt∫uu	utt∫u(kwa)	utt∫u ~ utt∫uu	*ut∫u	$oipi_1to_2$	228
229	'fish hook'	-	-	uzi	uzĩ	-	-	-	INV	opodi	229
230	'mother'	amma	amma ~ ammaa	amma	amma	amma	amma	ama	*amma	omo	230
231	'sail'	hu	hu	Fu	huu	hu	hu	pu	*pu	po	231
232	'star'	hu∫	hu∫	Fu∫i	hĩ∫ĩ	hu∫i	hu∫i	pu∫i	*pu∫i	posi	232
233	'bone'	hunĩ	hunĩ	Funĩ	hĩnĩ	hunĩ	hunĩ	punĩ	*punĩ	pone	233
234	'duckweed'	mU	mo	mu	mu	mo	mo	mo	*m_	mo	234
235	'rice cake'	mut∫ii	mut∫ii	mut∫i	mutsĩ	mutt∫i	mut∫i	mutt∫i	*mut∫i	moti	235
236	'unhulled rice'	mum	moom	mumi	mumi	mumi	mUmi	mumi	*mumi	$momi_1$	236
237	'wood'	mur	-	muri	muri	mori	-	muri<L?>	*muri	mori	237
238	'spider'	kubu	k$^{?}$umo	kubu	kubu	kubu-	kubu	kubu	*k$^{?}$ubu	kumo	238

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
239	'tail'	wu-	wu-	wu	u-	wu-	-	-	*wu	wo	239
240	'male'	wuu	-	wu	wuu	wu	-	wu	*wu	wo	240
241	'axe'	wun	wun	wun	wun	wun	wun-	wun	*wun	$wono_2$	241
242	'to exist'	-	wum	wuri	wun ~ wuri	wun	wun	wun	*wu_(_)	wori	242
243	'fish'	-	j$^{\text{ʔ}}$uu	j$^{\text{ʔ}}$u	j$^{\text{ʔ}}$u	j$^{\text{ʔ}}$u	ju	j$^{\text{ʔ}}$u	*j$^{\text{ʔ}}$u	uwo	243
244	'ten'	-	-	-	-	tu	tu	tuu	*tu	to_2wo	244
245	'hare'	usak	usak	usagi ~ osagi	usagi	usagi	usagi	usagi	*usagi	$usagi_1$	245
246	'singing'	uta	uta	ota	uta	uta	uta	uta	*uta	$utapi_1$	246
247	'inside mind'	ura	ura	ura	ura	ura	-	ura	*ura	ura	247
248	'eating'	-kuree	kura(te)	kura-	kurai	kura(u)	kurau	kurau	*kur__	$kurapi_1$	248
249	'grass'	kusa	kusa	kusa	kïsa	kusa	kïsa	kïsa	*k_sa	kusa	249
250	'dark'	kura-	kura-	kura-	kura-	kura-	kura-	-	*kura	kura	250
251	'rice bran'	nuka	nuka	noka	nuka	nuka	nuka	nuka	*nuka	nuka	251
252	'ancient times'	muka∫	moka∫	moka∫i	mukasï	muka∫i	muka∫i	muka∫i	*muka∫i	mukasi	252
253	'village'	mura<L?>	mura<L>	mora	mura	mura	mura	mura<L>	INV	mura	253
254	'floor'	juka	-	-	juka	juka	-	juka<L?>	*juka	juka	254
255	'pillow'	mak$^{\text{ʔ}}$ïra	mahïra	makura	makura	-	makkura	makura	*mak$^{\text{ʔ}}$_ra	makura	255

No.	Gloss	Sib	Sho	Ong	Nas	Yen	Yoa	San	PA	OJ	No.
256	'spring'	haruu<L?>	-	haru<L?>	haru<L?>	haru<L?>	haru<L>	haru	INV	paru	256
257	'measure'	-	-	-	-	masï	-	masï<L?>	INV	masu	257
258	'sweat'	asïï	asïï	asï	ase ~ aʃe	asï	asï	asï	*asï	ase	258
259	'wind'	kade	kade	kaze	kaze	kazï	kazï	hazï	*kaz_	kaze	259
260	'temple'	tera	teraa	-	tera	-	tera	tera	INV	tera	260
261	'wing'	hanï	hanï	-han-	-hane	hane	hane	pane	*pan_	pane	261

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Abbreviations

AHBJ	Amami hōgen bunrui jiten [Classified dictionary of the Amami dialects] by Osada, Suma & Suyama, Nahoko 1977. Tokyo: Kasama Shoin.
IKJ	Iwanami kogo jiten [Iwanami dictionary of classical Japanese] by Ōno, Susum et. al. 1983. Tokyo: Iwanami Shoten.
JBKDJ	Sanseidō, Jidaibetsu kokugo dai-jiten; jodai-hen [Sanseidō great Japanese dictionary; a volume for Old Japanese] by Ikegami, Teizō et.al. 1967 Tokyo: Sanseidō.