

ABSTRACT

SHODON: THE PREHISTORY OF
A NORTHERN RYUKYUAN DIALECT OF JAPANESE

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The Ryukyuan dialects of Japanese are important not only in reconstructing the linguistic prehistory of the Japanese language but also for their internal history, that is, for what can be discovered about their history quite apart from what is known about the history of any other Japanese dialects. The main focus of this dissertation is on the latter question, particularly with regard to the dialect Shodon of the northern Ryukyus. The approach is internal reconstruction, utilizing the rich morphophonemics of the dialect. The reconstruction is based on alternations in noun shape due to the addition of enclitics, and on the morphophonemics of the Shodon adjective and verb subtypes. Detailed discussion of sound changes and sound-change orderings is given, and many words are reconstructed insofar as that is possible. It is hoped that this internal reconstruction using Shodon can be linked to other reconstructions in order to come up with a detailed view of the prehistory of Ryukyuan and, further, to form a link to the prehistory of the mainland Japanese dialects.

Shodon: The Prehistory of
a Northern Ryukyuan Dialect of Japanese

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Chapter I

INTRODUCTION

This dissertation largely consists of the internal reconstruction of Shodon, a dialect of the Amami islands, which are situated in the northernmost part of the Ryukyus, an arc of islands strewn between the southernmost Japanese mainland island of Kyushu and the island of Taiwan to the southwest.

1.1 PLACE OF SHODON DIALECT

Shodon is a typical member of the Setouchi subgroup of the Amami Oshima group of the Amami dialects, the northernmost dialect group of Ryukyuan. The core dialects of the Setouchi subgroup can be found within the political subdivision of Setouchi-chô, which encompasses the most southerly portion of Amami Oshima--the main island of the Amami chain, as well as in the immediately south-lying Kakeroma island--which hugs the southern Amami-Oshima coast, creating an inland sea--and the two much smaller outliers to the south, Uke and Yoro. Shodon village is in the easternmost portion of Kakeroma island, on a bay facing south.

1.2 SHODON DIALECT DATA

All the data for Shodon dialect used in this study have come from a single informant, Kanehisa Tadashi. (1) Besides himself authoring a very interesting and informative book on the language and culture of Amami (Kanehisa 1963), he has served as informant on Shodon dialect for Samuel E. Martin, Hattori Shirô, and Uemura Yukio. Martin was the first of these investigators to work with Kanehisa, in 1954, but his work did not see publication until sixteen years later (Martin 1970).

A general survey of the Amami islands was made in the late 1950's by the Kyûgakkai Rengô (the Union of Nine Learned Societies), the linguistic part of which was undertaken by Hattori Shirô, Uemura Yukio, and Tokugawa Munemasa. Together they published two studies of the Amami dialects, referred to herein as HUT 1959A and HUT 1959B. Hattori and Uemura both worked with Kanehisa at different times. The Shodon words in HUT 1959A were collected by Hattori, while those in HUT 1959B were collected by Uemura. Hattori has used Shodon data that he collected in many other articles as well, most notably in Hattori 1960, a very careful look at various conclusive forms of Shodon verbs and adjectives. Uemura has also discussed Shodon dialect forms elsewhere (Uemura 1959, 1962), contributing important data about accentual tunes of atonic words.

Most recently Matsumoto Hirotake (1982) has been contributing data and linguistic observations about Shodon dialect. I have not yet seen two of his earlier articles on Shodon.

(1) I give Japanese names in Japanese order, family name first.
Kanehisa's name is also often pronounced Kaneku.

1.3 THE METHOD OF INTERNAL RECONSTRUCTION

Internal reconstruction is one of several methods for reconstructing the earlier stages of languages. (2) It can be used within a single dialect or language if the dialect or language has morphophonemic alternation. The technique strives as much as possible to reconcile the related alternants of a morpheme--to give historical starting points in which there is no allomorphy. The inferred sound changes can be dated in respect to each other insofar as their effects interfere with each other. Typically, not all sound changes can be put into a relative chronology.

In addition, the method pays attention to the patterning of segments in the whole phonology, and such patterning is taken into account in the reconstruction. I use such patterning in my reconstruction of the raising of non-high vowels in Shodon by one height position, and in the related fronting and unrounding of *u after *t, *d, and *s.

It is not possible to guarantee that the result of internal reconstruction will be a synchronically homogeneous entity; that is to say, the resultant reconstruction may very well reflect facts from different periods of the history of the language. This is because the method of internal reconstruction retrieves only that for which there is evidence. If a change has left no trace, it is undetectable, and thus it cannot be brought to bear in the reconstruction. Such changes can often be detected, however, through application of the comparative

(2) For a concise and clear introduction to internal reconstruction, see Jeffers and Lehiste 1979:37-54.

method, where formally equivalent lexical items in different dialects or languages are compared in order to retrieve sound changes and reconstruct earlier forms.

1.4 INTERNAL RECONSTRUCTION OF SHODON DIALECT

My intent in doing an internal reconstruction of Shodon dialect is to provide a detailed set of sound changes and pre-forms(3) as a kind of "core sample" of Ryukyuan language history. Insofar as any other Ryukyuan dialect conforms in its own set of sound changes to those of Shodon, it can be expected that the reconstruction (both sound changes and pre-forms) proposed here will be helpful in reconstructing its own set of internal changes, and insofar as it does not conform, this reconstruction will be less helpful.

The pre-Shodon forms reconstructed here will ultimately require considerable modification to fit in with data from other dialects. It should also be noted that no claim is made that pre-Shodon is the same or should be the same as proto-Ryukyuan, the reconstruction that would result from the comparison of a number of representative Ryukyuan dialects. Some parts of the reconstruction do not reach back that far (for example the near-total inability to reconstruct diphthongal origins for some pre-Shodon * $\xi\xi$ and * $\eta\eta$, as opposed to the appearance of diphthongal descendants of those original diphthongs in some Miyako dialects); some parts reach back even further.

(3) I use the word "pre-form" to refer to an internally reconstructed earlier form of a presently existing lexical item, morpheme, or part of a lexical item. As such it is the equivalent of the word "proto-form" for comparatively reconstructed items.

1.5 THE UTILITY OF AN INTERNAL RECONSTRUCTION OF SHODON

Ryukyuan dialects have long been used in comparison with Japanese mainland dialects, including those earlier dialects such as Old Kyoto or Old Japanese that are preserved only in written documents. Generally the intent has been to come to a better understanding of the prehistory of the language. But most attempts to use Ryukyuan as a clarification of prehistory have suffered from the overwhelming tendency to view Japanese mainland data, especially those in written records, as primary, and to view Ryukyuan as strictly secondary. Generally, few attempts have been made to take the Ryukyuan evidence at face value, and any such attempts have been hindered by the great variety of Ryukyuan dialects, and by the thickly layered accretion of sound changes involved for every one of them. As far as I am aware, no attempt has been made to take a single dialect and allow it to speak for itself through internal reconstruction--purposely ignoring other dialects, especially Japanese, until after the basic reconstruction has been completed. While such a reconstruction has the obvious pitfall that it cannot spot sound changes for which there is no internal evidence and cannot spot some analogical changes, again those for which no internal evidence remains, it has as its principal strength the fact that it will reconstruct only that for which there is internal evidence, thereby giving a reasonable clue to what Ryukyuan actually can tell us about general Japanese-language prehistory and what it cannot. In the process, it can serve as an anchor point for further Ryukyuan-internal studies which emphasize comparative reconstruction and aim to reconstruct as homogeneous a

proto-Ryukyuan as possible. This proto-Ryukyuan in turn can serve as a point of comparison with mainland dialects, including those surviving only in written records for obtaining a better understanding of proto-Japanese.

1.6 HATTORI'S RYUKYUAN A : B DISTINCTION

An example of the type of mistake that is possible when Ryukyuan-internal data are not given their due is Hattori Shirô's (1932) reconstruction of an equivalent of the Old Japanese A : B distinction of vowels (or syllables, depending on the particular scholar's point of view) within Ryukyuan, because of the existence of such a distinction within Old Japanese, and its chance overlap with certain facts of Ryukyuan vocalism. Hattori, however, did later correct his own mistake, in a landmark paper (Hattori 1976).

More recently (1979) Hattori has called for independent internal reconstruction of dialect prehistory, precisely to avoid making unwarranted assumptions from the situations in other dialects. This dissertation is one attempt at such a reconstruction.

Chapter II

SHODON NOUNS

2.1 PRELIMINARIES

2.1.1 Vowels and Consonants of Shodon Dialect

2.1.1.1 The Shodon Vowel System

Depending on point of view, Shodon may be seen to have a five-vowel, seven-vowel, or even a fifteen-vowel system. Thinking in terms of only vowel nuclei, the system consists of five vowels, namely:

i	u
e	o
a	

Whether there are larger systems depends on one's point of view regarding palatal and labial elements that may come before these vowels. The elements in question are represented in Martin's orthography by y and w, respectively. The maximal vowel system of fifteen vowels will simply consist of all the possible combinations of palatal or labial elements with the vowel nuclei:(4)

- (4) There are distributional irregularities that should be kept in mind. The front vowels i and e do not occur after q; the i : yi and e : ye oppositions are neutralized after q in favor of yi and ye, yielding the syllables qyi and qye where x qi and x qe would be expected, as, for example, in loanwords (the prefixed "x" shows an impossible or ungrammatical string): qyéésat(i) 'greetings' for Sino-Japanese áisatu '[id.]' (x qéésat(i) would otherwise have been expected). The i : wi and e : we oppositions after word-initial h are also neutralized, in favor of #hwi and #hwe, with x hi or x he impossible except word-internally. To recapitulate, the impossible syllables are x qi, x qe, x #hi, and x #he. (Word-internally we find such

! ØV:		! yV:		! wV:	
! i	u	! yi	yu	! wi	wu
! e	o	! ye	yo	! we	wo
! a		! ya		! wa	

The seven-vowel system takes yi and ye and interprets them as unitary vowels, and treats all other cases of palatal and labial elements as semivowels, yielding the following system:

yi	i	u
ye	e	o
	a	

This is a common view of Japanese linguists concerning Amami vowel systems, as exemplified by Hirayama et al. (1966).

Before giving my own reasons for my choice, I first examine the system of consonantal nuclei of Shodon, and their possible combinations with palatal and labial elements and vowel nuclei.

2.1.1.2 The Shodon Consonant System

Shodon dialect has the following consonants, arranged into a structural chart:

examples as wihi(i)^ 'bucket' and dehe(e)^ 'bamboo'.) The symbol "^" after a word shows that it is atonic. Both yV and wV sequences can occur syllable initially; see text below for details. But the sequences wu and wo occur only syllable initially. There is no x Cwu or x Cwo. The sequence wu only occurs word initially, and wo occurs only in the suffixal verb ~-oowom^, for which see the verb chapter.

labial	apical	velar	glottal		
p	t	k	q	unasp.	voice-
-	th	kh		asp.	less
-	s	-	h	fric.	
b	d	g		stop	voiced
-	(z)	-		fric.	
m	n	-			nasal
	r				liquid

Speaking in terms of these "consonantal nuclei" only, we may say that the positions of articulation are labial, apical, velar, and glottal. For all of those positions there is an aspirated/unaspirated opposition in the voiceless set. There is a full set of voiceless unaspirated oral consonants, but there is no x ph among the voiceless aspirated set.(5) The glottal consonants q and h differ only as to continuousness: q is a stop and h is a fricative; q and the unaspirated stops make up a natural class, and h may be classed either as an aspirated consonant or as a voiceless fricative. I class it with s as a fricative because of its interaction with the aspiration rule in a manner identical with that of s. See below. The segment z is put in parentheses because it appears only in recent loanwords, and plays a marginal role in the phonology. Besides aspiration and frication, the oral consonants differ in terms of other features as well: voiced/voiceless, nasal/nonnasal, and liquid/nonliquid. There is a full

(5) For a discussion of voiceless labial consonants see the adjective chapter.

set of voiced oral consonants, but there are only two nasal consonants, n and m, with no x ng (i.e., a velar nasal). As in all other varieties of Japanese, there is only one phonemic liquid, and that is an apical flap.

I stated above that the chart introduced consonantal nuclei. In fact, as the reader may already have suspected, there is a question as to whether it is appropriate to include what I have called the palatal and labial "elements" in the consonant, in the vowel, or simply to keep them separate. Martin (1970:97,98,101) has written them separately, but points out that the palatality sometimes shows up in the vowel, sometimes in the consonant, and sometimes as a glide in between. But to group the palatal and labial elements with the consonants explains, for example, why sy and ty can be syllable-final when syi or tyi or dyi have been syncopated. The effect is to create a set of palatalized and labialized consonants in addition to the "plain" set, as follows:

! labial !	! apical !	! velar !	! glottal !	
! py -- !	! ty -- !	! ky kw !	! qy qw !	! unasp. !
! -- -- !	! thy -- !	! khy khw !		! asp. !
! -- -- !	! sy -- !	! -- -- !	! hy hw !	! fric. !
! by -- !	! dy -- !	! gy gw !		! stop !
! -- -- !	! -- -- !	! -- -- !		! fric. !
! my -- !	! ny -- !	! -- -- !		! nasal !
! -- -- !	! ry -- !	! -- -- !		! liquid !
				! palatalized !
				! labialized !

Palatality is possible everywhere that consonants already exist on the chart of consonant nuclei, save for x zy, which is phonologically neutral with dy, and therefore omitted. Note that ty is phonetically a palatal stop ([c]), not merely a palatalized dental stop, and the segments thy and dy are phonetically affricates, the former a voiceless aspirated palato-alveolar one ([tʃ^h]), and the latter a voiced palato-alveolar one ([dʒ]). Labialization is possible only for velar and glottal consonants.

A problem remains. I have opted to interpret all of a pre-vocalic sequence as part of one segment, and I have implied that palatality and labiality are nothing more than properties of other segments. However some syllables begin with either y or w. There is a choice of interpreting y and w in this case as either initial segments in their own right, or as palatalized and labialized zero consonants, convenient fictions that are often represented in Japanese linguistic literature with an apostrophe ('). Thus Martin's ya and wa would be phonemically represented as 'ya and 'wa. Martin's orthography requires the occasional use of a hyphen to separate syllables that would otherwise not be clearly distinguishable. For example, he writes ..Vt-yV.. to distinguish a sequence of a syllable ending with t and one beginning with y, from a sequence of a syllable ending in a vowel and one beginning with ty. He writes the latter ..VtyV.., since one would imagine by default that, with the syllable boundary inserted, the sequence would be ..V-tyV... Since it is convenient for me to use Martin's over-segmental orthography even though I analyze the

non-vocalic sequences in syllable-initial position as unitary, and since it is necessary to use the hyphen for separating morphemes, I replace Martin's hyphen with the zero-consonant device, and, as with Martin's hyphen, I use my apostrophe only when necessary to indicate where a syllable boundary falls. Thus I write mók'yo 'Thursday' to show that k and y are in succeeding syllables, and I extend the orthographic device to cover disambiguation of aspiration as well, as in hák'hudu 'as much as the box', even though this use of the apostrophe is not strictly speaking within the bounds that I have set for it as a phonemic marker.

2.1.1.3 Vowels Again

Let us now return to the question of the synchronic interpretation of Shodon vowels. Since we have elected to treat all written semivowels as aspects of a unitary consonant segment, it is now clear that the appropriate vowel system is the five-vowel one:

i	u
e	o
a	

It should however be kept in mind that the color of the front vowels is affected by a preceding palatalized segment; wherever the sequences yi or ye are seen, the quality of the front vowel is always palatal, [i] and [e] respectively, whereas the quality of the same vowels anywhere else is somewhat retracted, and not at all palatal.

Accent

I add here a brief word about accentuation. Shodon has two sets of

words, those that are tonic (= accented) and those that are atonic (= unaccented). The distinction pervades all major categories of words in Shodon, including nouns, adjectives, and verbs.

Tonic words are accented on their second mora underlyingly, with the highest tone, level 4. The tune is 241, where 1 is the lowest and 4 the highest pitch. If the accented mora is part of a heavy syllable, the accent spreads throughout both the nucleus and coda:

khagyíiryi-m → khagyíiryi-m → khagyíiryi-m 'limits, too'
 kham-nyu → kham-nyu → kham-nyu 'paper (Subject)'

Thus accented (i.e., tonic) words with heavy first syllable distribute the high pitch throughout that syllable, losing the initial pitch 2, and the same distribution happens in second syllables, with the final pitch 1 lost if the second syllable is also final. High pitch does not appear on the surface on a segment that is incapable of carrying pitch, even though the accent placement rule may have placed it on that mora to begin with:

kuk-nyu → kúk-nyu → kúk-nyu → kúk-nyu 'nail, peg (Subject)'

And word-finally the pitch drops only slightly in a heavy syllable, unless the final consonant is itself an enclitic, and thus not part of the word:

hyigyáá → hyigyáá (243) 'east'
 hakú-m → hakú-m (241) 'the box, too'

Atonic nouns have a combination of pitches 2 and 3, generally ending with a rise from 2 to 3 at the end of a word:

hamaa^ (323) 'beach'

But shapes ending with ..VCCV have a slightly falling pitch on the first vowel, followed by a rise to 3 on the last syllable (Uemura 1959, 1962).

qapra^ (32) 'oil'

2.1.2 Derived Nature of the Non-homorganic Palatals and the Labials

Neither the non-homorganic palatalized syllables (i.e., all CyV except Cyi) nor the labialized syllables (CwV) are original. For the palatalized syllables there are three main sources:

- Contraction of a front-vowel syllable with a following syllable that has either an initial glide or an initial glottal stop,
- Palatalization of the syllable by a preceding *yi,
- Loans, largely Sino-Japanese.

For the labialized syllables there are two main sources:

- Contraction of a rounded-vowel syllable with a following syllable that has either an initial glide or an initial glottal stop,
- Loans, largely Sino-Japanese.

The end result is the reconstruction of a previously existing seven-vowel system that included *yi as a unitary segment, and that had a much simpler syllable structure, in which the only glides are syllable initial, and function as full consonants.

2.1.2.1 Three Non-original Sources of Palatalized Syllables

In this section I examine the sources of palatalization. It should be kept in mind that the end result will be that only *Cyi and *'yV will remain as possible syllables with palatal elements after this part of the reconstruction is completed.

2.1.2.1.1 Contraction

In this subsection I present a thumbnail sketch of the argument for contraction in the imperfect forms of verbs.

The imperfect form of the existential animate verb is wúm '(there) is'. The segmentation of the verb base from the imperfect suffix is $wu'- + -m$. Nearly all other verbs have a different imperfect suffix, however. Examples of such verbs are:

yubyúm	'call'	=	yub'-	+	-yum
khakyum [^]	'write'	=	khak [^] -	+	-yum
yumyum [^]	'read'	=	yum [^] -	+	-yum
qatmiyum [^]	'gather'	=	qatmi [^] -	+	-yum

The imperfect suffix is -yum if a consonant precedes, yielding a syllable ..Cyum; or -'yum with the dummy consonant if a vowel precedes, yielding a syllable ..'yum.

What we have just examined is the predicate form of the verb. Let us also examine a form of which one function is adnominal:

wún	=	wu'-	+	-∅∅n
yubyún	=	yub'-	+	-yun
khakyun [^]	=	khak [^] -	+	-yun
yumyun [^]	=	yum [^] -	+	-yun
qatmiyun [^]	=	qatmi [^] -	+	-yun

Comparing the four sets of suffixes, we see that more cutting is possible (this time listing only the subtypes of each suffix):

-	m	-	n
-	yu-m	-	yu-n
(-	'yu-m	(-	'yu-n)

It seems obvious enough that the imperfect predicate suffix is -m, and that the imperfect adnominal suffix is -n. We must conclude that -(')yu- is extraneous material, but of what sort? The answer lies in

the animate existential verb; I assume that it was once an imperfect progressive auxiliary, as well as a separate verb with lexical meaning. The imperfect progressive use of existentials is very common in languages. And naturally enough, one expects that if the use does not spread among all the verbs, then it is precisely existentials that will be exempted; and that is what has happened in the case of the Shodon verb system.

The obvious problem that must be confronted now is, of course, that -yu- does not look like wu'-. The accentuation is no problem; only the accent of the first member of a compound is kept in surface forms. Thus the remaining discrepancy is -y.. vs. -w... Note, however, that there is a form called the infinitive, (6) as follows:

yubí	'call and'	=	yub'-	+	-Øi
khakyi^	'write and'	=	khak^-	+	-yi
yumyi^	'read and'	=	yum^-	+	-yi
qatmi^	'gather and'	=	qatmi^-	+	-ØØ

I assume that the imperfect forms are built out of an old construction of infinitive plus progressive auxiliary (= existential verb); translated into the synchronic forms available at this point, the assumption builds the following compound verbs (with # standing for compound boundary):

*yub-Øi#wu-m/n'	*'is calling'	>	'calls'
*khak-yi#wu-m/n^	*'is writing'	>	'writes'
*yum-yi#wu-m/n^	*'is reading'	>	'reads'
*qatmi-ØØ#wu-m/n^	*'is gathering'	>	'gathers'

(6) I have simplified matters by choosing allomorphs to make the infinitive forms of uniform length. For details see "Shodon Verbs."

Thus a sequence of two sound changes has to have converted the ancestors of the sequences (*)..yi'wu.. and (*)..i'wu.. into either ..yu.., if a consonant preceded, or ..'yu.., if a vowel preceded:

Homorganic Gliding

'w > 'y / i_____

e.g.: *qatmi'wum^ > qatmi'yum^, *'yumi'wum^ > *'yumi'yum^
(Historically 'yubi' is remodeled from *'yubyi'.)

Contraction

yi'y > y

e.g.: *'yumi'yum^ > 'yumi'yum^

I assume that similar contractions led to many of the CyV syllables.(7)

2.1.2.1.2 Progressive Palatalization

Many words in Shodon dialect that have palatalized syllables in them also have, the string ..yi.. just before that palatalized syllable. Thus it would appear that there has been a progressive palatalization by the preceding syllable of the following one. It turns out that there are several caveats that must be put on this statement, but it is basically correct. The main exception is that syllables beginning with a labial consonant appear to be exempt from the generalization, since there tends not to be any relation between a preceding palatal and the palatality of a following labial-initial syllable; palatality in such syllables must be accounted for either by contraction or borrowing.

Examples of palatalized words are:

1. with apicals:

(7) See Phonotactic Evidence in the discussion of CwV syllables below for more discussion of CyV cases.

- myithyaa^ 'earth' < *myithaa^
- myi#thyi-m^ 'even seeing' < *myi^#thi-m (gerund morpheme #thi palatalizable to #thyi)
- qyidyum^ 'fountain' < *qyidum^

2. with velars:

- qyikhyassa^ 'how much?' < *qyikhassa^
- nyigyak^ 'bitter' < *nyigak^
- qyikhyi 'go!' < *qyik(h) '-ii (compare yub'-ii 'call!')

There are also examples that have a following ..Cyi.., and in the absence of independent evidence, it is impossible to say whether the ..Cyi.. is from *..Cyi.. or *..Ci... Such evidence would be an allomorph of a particular morpheme, as in the case of the gerund morpheme #thi/#thyi above, and it could also be that the syllable is not only palatalized, but aspirated as well, since aspirated palatalized syllables are all derived through the palatalization of a syllable that has an original non-high vowel. Only syllables with non-high vowels were originally aspirated, as is explained below. Examples of the two kinds of ..Cyi.. words preceded by ..yi.. are:

- qyinyii^ 'riceplant' < ?*qyini^, ?*qyinyii^ (not disambiguable)
- qyikhyii^ 'pond' < *qyikhii^ (disambiguable because of the aspiration)

So, to summarize briefly, the operation of the progressive palatalization sound change may be seen both: 1) statically, in the many examples of palatalized syllables with the sequence ..yi.. in the preceding syllable; and 2) dynamically, in the effects of this sound

change on morphemes that now have palatalized allomorphs due to its operation (and of its equivalent synchronic morphophonemic rule).

2.1.2.1.3 Loans

In addition there are a great many loanwords in Shodon dialect from Japanese, most of them Sino-Japanese. Many of these words have palatal syllables in them, and they have been borrowed whole. A few examples will suffice:

- nyúúbai 'beginning of the rainy season' (Sino-Japanese)
- syabééyum 'chatters' (Native Japanese)
- khyékkwa 'result' (Sino-Japanese)
- khyú-n 'in a hurry' (Sino-Japanese, with Sd enclitic)
- thyommage^ 'topknot' (mixed SJ and NJ)

All these words, and many others like them, are borrowed from Japanese.

2.1.2.2 Sources of Labialized Syllables

The facts for labialized syllables are similar to those for palatalized ones. The main difference is that there is no "progressive labialization" sound change that parallels that of progressive palatalization, with the result that there is no intrusion of labiality from preceding syllables. What is left to explain the labial glides, then, is either contraction or loans, with the exception, as in the palatal-glide syllables, that syllable-initial w is recognized as possibly original.(8)

(8) In addition see the adjective chapter for a discussion of hwV from *fV.

2.1.2.2.1 Contraction

There are two primary types of evidence for contraction:

- Morphological: a few verbs alternate between allomorphs with back rounded vowels and allomorphs with ..w...
- Phonotactic: several words have vowel length in their first syllable instead of in the characteristic second syllable.(9)

2.1.2.2.2 Morphological Evidence

There are two verbs, kúú(r)yum 'closes' and khoo(r)yum^ 'buys', the infinitives of which are kwíi and khwee^, respectively. We know from the treatment of verbs above, where the allomorphs of the infinitive were analyzed out, that the infinitive has three main allomorphs, mainly -i, -yi, and -∅. The allomorph -∅ is of no use here, because it is obvious that the allomorph must have a front vowel in order to effect the surface-form changes seen.

In the following discussion I make some assumptions about the morphology of Shodon verbs that I substantiate in the chapter "Shodon Verbs." See there for details.

The imperfect predicative verb forms (i.e., the citation forms above) are analyzable initially as follows:

kuur'-y#u-m
khour^-y#u-m

(9) See below for details on predictable vs. non-predictable vowel length.

The result is "infinitive" forms serving as bases for the imperfectives that are at variance with the free infinitives:

kuur'-y : kwíi
khood'-y : khwee^

But the assumption that the ..r- at the end of each imperfective base is analogically tacked on(10) now gives the older roots kuu'- and khoo^-. And these are the same roots seen in the gerund forms kúú#thi 'closing' and khoo#thi^ 'buying'.(11) Thus it must be that the combinations *kuu'-(?y)i and *khoo^-(?y)i are the ancestors of kwíi and khwee^, respectively. In other words, there has been a contraction, and the labiality of the lexical morphemes has been "squeezed" into a labial glide, while the infinitive morpheme has been stretched to give a two-mora free word, a requirement of the phonotactics.

2.1.2.2.3 Phonotactic Evidence

Vowel length is predictable under certain circumstances when it falls on second syllables. But often it will fall on a first syllable even in a native Shodon word. In such a case many of the syllables that have long vowels also turn out to be palatalized or labialized (listed in that order), and so I assume that Homorganic Gliding (if necessary) and Contraction have occurred, as with the verb imperfect discussed above:

(10) See "Shodon Verbs" for more on analogical addition of ..r-.

(11) But the gerund forms themselves do not serve as sufficient evidence for the analogy because of the existence of other r-stem verbs that also have an imperfect with ..r- but a gerund without it. The critical piece of evidence is the fact that the infinitives of the r-stems have ..r-, while these pseudo-r-stem verbs do not.

- kyaa(r)yum^ 'splits firewood' ?< *kyiy/wa(a)r^(?y)i#wu-m
- kyoosyum^ 'destroys, tears down' ?< *kyiy/wo(o)s^-yi#wu-m
- kyuu-bi-m^ 'the belt, too' ?< *kyiy/wu(u)bi^-m
- khyáá#gii 'kind of tree' ?< *khiy/wa(a)'^-gii(12)
- qweesyum^ 'gives it to a superior' ?< *quy/we(e)s^-.. or
*qoy/wi(i)s^-..(13)
- qwiigyum^ 'swims' ?< *quy/wi(i)g^-..
- qwííyum 'grows plants' ?< *quy/wi'^-..
- qwiium^ 'testicles swell during intercourse' ?< *quy/wi^-..
- hwaasyi^- 'funny' ?< *huy/wa(a)syi^-..(14)

(The ..(r).. in kyaa(r)yum^ shows a free alternation between forms with and without r.)

Note that at the point that Contraction has been posited, we no longer need to see *q as a pre-Shodon phoneme. It arose because sequences like *##iya and *##uwa underwent Contraction ("##" signifies a word boundary), at which point the word-initial phonetic glottal stop underwent phonologization. Before Contraction there was no x *##qya : *##ya distinction, nor any x *##qwa : *##wadistinction, but after Contraction there was. The distinctions before Contraction were *##iya

- (12) The first syllable of the reconstructed form must be *khi and not *kyi, because aspiration is not original in words with (..)khy(..). See below for details.
- (13) The two possibilities follow from the discussion of 'buy' and 'close' above.
- (14) Comparison with classical Japanese wokasi shows that we have been led far astray here because we have not yet "discovered" a sound change that lenites medial *k to h under certain circumstances and then fronts it if the word begins with *q or *w.

: *#/#ya and *#/#uwa : *#/#wa.

2.1.2.2.4 Loans

By far the greatest number of CwV words are borrowed from Japanese, but either from a time or from a dialect that had the sequence (..)kwa(..) or (..)gwa(..) in it. While modern Tokyo dialect no longer has such syllables, they have disappeared from the dialect only in modern times, and they are still present in many other dialects. Most of the Japanese loans are in turn (Earlier) Sino-Japanese, and it is (Earlier) Sino-Japanese that provides the majority of such forms in any dialect.

Here are some examples:

- kyóókwasyo 'textbook' ((E)SJ kyook(w)ásyo '[id.]')
- gwayóósyi 'drawing paper' ((E)SJ g(w)ayóosi '[id.]')
- kwasyi(i)^ 'pastry' ((ESJ) k(w)ási '[id.]')

2.1.3 Aspiration Suppression

As pointed out above, Shodon has an aspiration opposition. It also has an "aspiration suppression" morpheme structure condition:

Within a morpheme there can exist at most one aspirated consonant, but no consonants will be aspirated if to their left there exists an aspirated consonant or h or s.

I put the words "aspiration suppression" in quotes because in fact the morpheme structure condition does not suppress aspiration; rather, it merely states a condition under which aspiration in a Shodon morpheme can or cannot occur.

In addition, as is so often the case with morpheme structure conditions; there is a similar morphophonemic rule of aspiration suppression:

Within a sequence of morphemes bounded by word boundaries, any aspirated consonant that comes to the right of another aspirated consonant or h or s is deaspirated.

The effect of this rule is to assure that no more than one aspirated consonant is to be found between word boundaries, with the proviso that if s or h occur before such an aspirated consonant in an underlying form, then they are to be treated as if they themselves were aspirated consonants.

Examples of the various effects or non-effects are as follows:

- thakaara^h 'treasure' (morpheme structure condition)
- khak-ii^h 'write it' (morphophonemic rule)
- hyóó-tan(u) '(kind of fruit)' (" ")
- syín#khoo 'temple incense' (" ")

The first word is a single morpheme as well as a single word. The second word is composed of two morphemes, but the first morpheme contains both of the consonants; however, the word will be aspirated only if the following vowel is neither yi nor one kind of u. See the section on vowel raising for details. The third word is composed of two morphemes (it is a Sino-Japanese loan), but since the morphemes are not separated by a compound boundary, the underlying #thanu# loses its aspiration. The fourth word is also a Sino-Japanese borrowing, and again is composed of two morphemes, but we are forced to put a compound word boundary in between the two morphemes in order to account for the

aspirated ..khoo after s...(15)

It should be kept in mind that any unaspirated consonant that comes after an aspiration-suppressing segment cannot be used as historical evidence for an unaspirated consonant, unless there is some independent evidence to that effect. Any such unaspirated consonant must be considered neutral to aspiration, and approached with great caution. Therefore, in the following section on raising, I limit myself to word-initial consonants for the argument that hinges on aspiration distinctions.

2.2 CHANGES INFERRED FROM NOUNS

2.2.1 Vowel Raising

The words in the list below exemplify the distribution of aspirable consonants with following vowels.(16)

ku : kutyí 'mouth'

- (15) The boundary is also required to account for the fact that aspiration is not suppressed for another reason: There is a rule that states that the second consonant of a consonant cluster may not be aspirated. But this rule does not operate over word boundaries. I therefore posit internal word boundaries for exceptions to any aspiration irregularity, and write lexical word boundaries double (##) and internal word boundaries single (#) in order to distinguish them from each other. I normally do not write in the double boundaries, in order to keep the text relatively uncluttered, and allow a space to do their job. I assume that double and single boundaries must be distinguished because the former defines a separate lexical item, and the latter is merely needed within a single lexical item to handle morphophonemic anomalies.
- (16) In fact the distribution of aspirated and unaspirated consonants is free in relation to following vowels in the synchronic phonemic system, but the number of cases of syllables in brackets just below the word list is very small in non-neutral environments, and they are inconsequential in this analysis.

khu	: khumáa	'here'
kho	: khoo [^]	'skin'
kha	: khamyí	'paper'
kyi	: kyinu [^]	'clothing'
khi	: khii [^]	'tree'
khe	: khééyum	'exchanges'
thu	: thuryí	'bird'
tho	: thohoo [^]	'octopus'
tha	: thanii [^]	'seed'
tyi	: tyii [^]	'blood'
ti	: tirúu	'crane (bird)'
thi	: thii [^]	'hand'
the	: qathée	'address'

The commonly occurring syllables are arrayed as follows, with rarely occurring forms (which can be explained as due to other phenomena) put into square brackets:

	back vowels:	front vowels:
	unasp. asp.	unasp. asp.
k(h):	ku ! khu	kyi ! [khyi]
	-----!-----	-----!-----
	[ko] ! kho	[ki] ! khi
	-----!-----	-----!-----
	[ka] ! kha	[ke] ! khe
t(h):	[tu] ! thu	tyi ! [thyi]
	-----!-----	-----!-----
	[to] ! tho	ti ! thi
	-----!-----	-----!-----
	[ta] ! tha	[te] ! the

The sequence ye plays a marginal role in the synchronic system; therefore, I ignore it in this exposition.

The part of the vowel system that remains is:

yi	i	u
	e	o
		a

Before the non-high vowels e, o, and a, only aspirated consonants appear. Before yi, only unaspirated consonants appear. Before i and u, both aspirated and unaspirated consonants appear, but there is no x ki,

only khi. It seems safe, then, to assume that aspiration is predictable for non-high vowels, that lack of same is predictable for yi, which is high, but that i and u are unpredictable, for some unknown reason. Let us dub those i and u that behave like yi (exerting a non-aspirating influence on the preceding consonant) i-1 and u-1, and let us dub those i and u that behave like the non-high vowels (exerting an aspirating influence on the preceding consonant) i-2 and u-2:

aspiration- suppressing	aspirating
! yi i-1 u-1 !	! i-2 u-2 !
	! e o !
	! a !

The simplest assumption is that a vowel raising has occurred. That assumption would allow us to tie the aspiration phenomenon directly to a phonological cause, namely the height of the following vowel, whereas otherwise we would be obliged to arbitrarily state whether a particular case of i or u triggers or suppresses aspiration. I therefore claim that i-2 and u-2 were non-high. The chart above thus shifts as follows for the moment:

! yi i-1 u-1 !
! i-2 u-2 !
! e o !
! a !

At this point aspiration is completely predictable; it becomes phonologized only when the vowel raising occurs.

At first glance it appears that there is a four-height system during the pre-raising period. However, rounding, a non-distinctive feature of the post-raising system, may be put to use as a distinctive feature at this earlier time, thus obviating the necessity for four heights. The system is then:

! palatal !		non-palatal		!
! yi	! i-1 = i	! X	! u-1 = u	! high !
! X	! i-2 = e	! X	! u-2 = o	! mid !
! X	! e = ɛ	! a = a	! o = ɔ	! low !
! non-round		! round		!
! front		! back		!

Now, why is there a single palatal vowel? It is well to recall that the distribution of *i is limited, and that there is no *u after *t. It is quite obvious that "*i" is merely the allophone of *u after *t. There is now an empty space where "*i" once was; it is obvious that "*yi" should be moved over one space to the right, and be rechristened *i. Its palatal quality, if existent at this time, is not distinctive. The resultant vowel system is:

!	i	!	X	!	u	!	high	!
!	e	!	X	!	o	!	mid	!
!	ɤ	!	a	!	ɔ	!	low	!
!	non-round		!	round		!		
!	front		!	back		!		

Let us now review the sound changes in their chronological direction. They are as follows:

*ki > kyi	*ti > tyi
*ke > khi	*te > thi
*kɤ > khe	*tɤ > the
*ku > ku	*tu > ti
*ko > khu	*to > thu
*kɔ > kho	*tɔ > tho
*ka > kha	*ta > tha

2.2.2 Apocope and Vowel Lengthening

In the next few sections I show that at an earlier time Shodon dialect did not have any closed syllables, and that such syllables resulted from the loss of high vowels under certain conditions. The partial loss of high vowels often resulted in alternations between forms of words that had lost word-final high vowels, and those forms where the high vowels had been preserved. Because of strong structural evidence, certain word-internal cases of syllable-final consonants must simply be assumed to have once been sequences of consonant plus high vowel.

2.2.2.1 Syllable Structure and Syllable Shape Alternations

There are five syllable types in Shodon dialect; they are as follows, with examples of each:

- C skyí-m 'plow, too', thkyii^ 'moon'
- CV sakyí-m 'ahead, too', wakú-m 'frame, too', dehee^ 'bamboo'
- CV: sehée 'rice wine', khamááku-m 'straw bag, too', thatááme 'mat'
- CVC qaknye^ 'shopping', sakyí-m 'ahead, too', khamák 'straw bag'
- CV:C mii#hykyaarka^ 'dazzling', khanaasykya^ 'cute'

2.2.2.1.1 The Syllable-type .C.

The syllable-type .C. is composed minimally of a consonant. If the consonant is aspirable, it must be aspirated. Palatality is distinctive, and it is not limited, as it is elsewhere, to apicals; it may also occur after the voiceless velar stop: khy. The possible consonants in syllables of this type are (Martin 1970:105B):

! plain !	! palatalized !	! labialized !
! s !	! sy !	! -- !
! - !	! hy !	! hw !
! th !	! thy !	! -- !
! kh !	! khy !	! -- !

They are always followed by one of the following consonants (Martin 1970:105B):

! plain !	! palatalized !	! labialized !
! s !	! sy !	! -- !
! t !	! ty !	! -- !
! k !	! ky !	! kw !
! p !	! -- !	! -- !
! [rare] !	! !	! !
! (r) !	! (ry) !	! -- !

The consonants r or ry occur only if s or sy precedes; that is, if there is a .C. syllable before r or ry, it must be .s. or .sy.. The consonant following the syllable .C. is phonetically not aspirated (and neutral to aspiration), since the second of two consonants can never be aspirated (unless separated by an internal word boundary). It is thus not possible to use lack of aspiration here as a clue to etymological vowel color. See, for example, hwtá(a) 'lid', where the form would be x hwthá(a) were it not for the above-mentioned constraint; and khyku(u)^ 'chrysanthemum' may, all else being equal, require either *.ku.. or *.ko.. as its reconstruction.

I return to the history of these forms after treating word-final alternations involving apocope.

2.2.2.1.2 The Syllable-type .CV.

Syllables of the type .CV. may be composed of the sequence .C(h)(w/y)V.. They are composed of two subclasses, those that do not alternate with other syllable types, and those that alternate with .CVC. syllables. Of the former, examples are dehee^ 'bamboo' and thahak^ 'high'. Of the

latter there are those that close due to the addition of an enclitic, such as qyithooko(-m)^ 'cousin (, too)' and qaknye(-m)^ 'shopping (, too)'. There is also a subtype that "borrows" the initial consonant from the following syllable, as in the discussion immediately below.

2.2.2.1.3 The Syllable-type .CVC.

In the discussion of alternations below, I will refer to various noun shape types. They are listed in the figures on the following pages. In these tables and in the rest of this chapter, I use certain conventions involving alternations and accent. Where a vowel appears in one alternant but not in another, it is put in parentheses; the same is done for alternating y. If a consonant alternates between voiced and voiceless, then it is written (")C, with C voiceless, and with the preposed parenthesized double quotation mark showing that it also appears voiced. An example is:

qaku(u")p(yi)^ = qakup^ / qakuubyi-..^ 'yawn'

And, because tonic accent often alternates between first and second syllable in different forms, I often postpose it, just as with atonic accent, simply to show that the word is tonic, since the placement is automatic.

Syllables of the type .CVC. belong to two classes, those that are stable (as for example qaknye^ above), and those that alternate in some way with other syllables. Examples of one subtype of the latter are as follows:

<u>.s á k.#</u>	'ahead'
<u>.s a.k y í-m.#</u>	'also ahead'
<u>.w á k.#</u>	'frame'
<u>.w a.k ú-m.#</u>	'frame, too'

Table 1

Monosyllabic Word Types

- | | |
|----------------------|------------------|
| 1. Expansive | |
| CVV / CV-m | hwá(a) 'leaf' |
| | |
| 2. Dependent [loans] | |
| CVi | háí 'lungs' [SJ] |

This is the first of four tables that recapitulate the noun shapes of Shodon dialect as set out in Martin 1970. They divide the information into four parts, one for each noun length treated. The numbers (e.g., "3," "7b") are Martin's category numbers; the various subcategorization letters are mine, but I follow Martin's own practice in laying out the noun-class subtypes. The symbol "Vi" stands for sequences of any vowel other than i plus i. These are almost exclusively loans, with the exception of quraith(y)a(a)^. When "N" ("nasal") is contrasted with "C," the latter is meant to stand for all consonants but nasals; otherwise "C" stands for any consonant. "SJ" stands for "Sino-Japanese," words composed of Chinese morphemes but borrowed through Japanese. "NJ" stands for "Modern Japanese."

In both cases ..k.. is the last constituent of one alternating syllable and the first constituent of the other. All syllables of which it is a constituent are .CVC.. The alternation results not only in a second syllable being present when an enclitic is in place, but also in a first-syllable shape alternation .CVC. / .CV.. For noun types (called apocopating) that exhibit this type of alternation, see Tables 1 through 4. The origin of this alternation is discussed below as well.

2.2.2.1.4 The Syllable-type .CV:.

The syllable-type .CV:. is just like .CV., except that the vowel is

Table 2

Dissyllabic Word Types

3. Apocopating CVC / CVCV-m	qan(yi)^ 'ant'
4. Expansive CVCVV / CVCV-m	dehe(e)^ 'bamboo'
5. Dependent [loans] CVCVi	khatéi 'household' [SJ]
6. Apocopating contractile [largely loans] CVC / CVVCV-m	byo(o)k(yi)^ 'ill' [SJ]
7a. Top-heavy	
a. CVVCV	kyiia^ 'cicada'
b. CViCV [loans]	kaiko^ 'silkworm' [NJ; cf. mammusy(i)^ '[id.]']
c. CVCCV = CVNCV = CVCCV	hyindya^ 'goat' gusku^ 'castle'
7b. Top-heavy expansive	
a. CVVCVV / CVVCV-m	khyáági(i)^ 'black pine'
b. CViCVV / CViCV-m	yéíkyu(u)^ 'eternity' [SJ; only ex.]
c. CVCCVV / CVCCV-m = CVNCVV / CVNCV-m = CVCCVV / CVCCV-m	kyíń'yo(o)^ 'Friday' qukka(a)^ 'mother'
7c. Double-heavy (dependent second syllable) [loans]	
a. CVVCVi	khóóhei '(army) engineers' [SJ]
b. CViCVi	théínei 'polite' [SJ]
c. CVCCVi = CVNCVi = CVCCVi	qúúmei 'fate' [SJ] gaksyei^ 'student' [SJ]

long. Again, there are two subtypes, nonalternating and alternating. Examples of the former are kyiia^ 'cicada' and thatááme 'mat'. The alternating subtype includes two sub-subtypes:

- .CV:. / .CVC.
- (See Tables 1.1, 2.4, 6, 7b, 3.8, 10, and 4.13.)
- .CV:. / .CV:C.

Table 3

Trisyllabic Word Types

8. Expansive	
a. Top-heavy	
CVCCVCVV / CVCCVCV-m	qaddyaha(a)^ 'wooden clogs'
b. Others	
CVCVCVV / CVCVCV-m	qurathya(a)^ 'boarding, boards' [see quraith(y)a(a)^ below]
9. Top-heavy apocopating	
a. CVVCVC / CVVCVCV-m	syuuduk(yi)'/^ 'tide time'
b. CViCVC / CViCVCV-m	khéísan(u) 'figuring accounts' [SJ]
c. CVCCVC / CVCCVCV-m	
= CVNCVC / CVNCVCV-m	gyinhap^/gyinhabu^ 'silver viper' [SJ-Sd]
= CVCCVC / CVCCVCV-m	qyittar(yi)^ 'five people'
10. Mid-heavy apocopating contractile	
CVCVC / CVCVVCV-m	khibú(ú)sy(i) 'smoke'
11. Single-shape	
a. Bottom-heavy	
none?	
b. Top-heavy	
a. CVVCVCV	kyóókwasyo 'textbook' [SJ]
b. CViCVCV	seidyika^ 'politician' [SJ]
c. CVCCVCV	
= CVNCVCV	géínama 'hard cash' [SJ]
= CVCCVCV	mákkuru 'jet black' [loan?]
c. Mid-heavy	
a. CVCVVCV	thatááme 'mat'
b. CVCViCV [loans]	khatéíkwá 'homemaking' [SJ]
c. CVCVCCV	
= CVCVNCV	basyammi^ 'banana' [SJ-Sd]
= CVCVCCV	huníggwa^ 'little boat'
d. Double top-heavy	
a. CVCCVVCV	kurmaaya^ 'driver'
b. CVVCVCCV	kyuubyíggwa^ 'little belt' [only ex.]

Of the former sub-subtype, there are in turn two subdivisions, listed below with examples:

a) formed due to enclitic addition (end of word):

- .d e.h e e.^# 'bamboo'

Table 4

Tetrasyllabic Word Types

12. Apocopating
- a. With heavy second syllable
 - a. CVCVVCVC / CVCVVCVCV-m khohoonot(i)'/^ 'nine'
 - b. CVCVCCVC / CVCVCCVCV-m nyigyirmisy(i)^ 'rice ball'
 - b. Top-heavy
 - CVCCVCVC / CVCCVCVCV-m qupredyin(u/yi)^ 'drowning'
 - c. Others [all listed]
 - CVCVVCVC / CVCVVCVCV-m getábak(u) 'shoe-holder box' [loan; anomalous]
 - qyityiryin(u) 'a single flower' [loan; anomalous]
 - quthyawan(u)^ 'rice bowl' [loan; anomalous]
 - (qugú[?y]is(u) 'cuckoo' [loan; anomalous])
13. Expansive mid-heavy
- a. CVCVVCVCVV / CVCVVCVCV-m qasaathida(a)^ 'morning sun'
 - b. CVCViCVV / CVCViCV-m quraith(y)a(a)^ 'boarding, boards' [only case; fuller variant of qurathya(a)^]
14. Other (single-shape)
- a. CVCVVCV'V qasaagao^ 'morning glory' [only ex.]
 - b. CVCVVCVCCV gadyaamyiggwa^ 'little mosquito' [only ex.]

- .d e.h e-m.^# 'bamboo, too'

b) formed due to apocopation in next syllable ("borrows" consonant of next syllable):

- .k h a.m á á.k u-m.# 'straw bag, too'

- .k h a.m á k.# 'straw bag'

I discuss the latter sub-subtype in the next section.

For a historical discussion of the alternation .CV:. / .CVC., see below. Nouns that exhibit this alternation are called expansive.

2.2.2.1.5 The Syllable-type .CV:C.

I know of no examples of a stable .CV:C. syllable (i.e., one that does not alternate with another syllable type). All examples alternate with syllables of the shape .CV:., and all are adjectives. The clearest example is:

#.m i i#h y.k y a a r.k a.^# 'dazzling'
 #.m i i#h y.k y a a.r u k.^# 'dazzlingly'

Note that the sequences ..kyaar.. (.CV:C.) and ..kyaa.. (.CV:.) are at issue, not the sequence miihy.., in which there is an internal word boundary (mii#hy..) obligatorily syllabifying between mii.. and ..hy... It should further be noted that nowhere else would ..hy(..) end a syllable (although ..hw(..) does, solely in the loanword qehú / qéhw 'F'). I treat this and similar alternations in my discussion of the special adjective alternations in the adjective chapter.

2.2.3 Origin of Apocoping and Expansive Alternations

Shape alternations in Shodon nouns are governed by whether the noun is followed by an enclitic, and if so, by which one. First note the two major alternation types:

1. Apocoping: (...).CV.CV-C. / (...).CVC.
 .sa.kyí-m. / .sák. 'ahead'
 .kha.máá.ku-m. / .kha.mák. 'straw bag'
2. Expansive: (...).CV(-)C. / (...).CVV.(C...)
 .de.he-m.^ / .de.hee.^ 'bamboo'
 .kha.mák. / .kha.máá.ku-m. 'straw bag'

Let us look at alternation type 1 first.

2.2.3.1 Apocope/Syncope

Before the enclitics -m 'also' and -n 'to', the final vowel of the apocopating dissyllables is heard; elsewhere it is not present:

sakyí-m / sák# yi / Ø
'ahead, too' 'ahead'

kyinu-m^ / kyin^# u / Ø
'clothing, too' 'clothing'

matí-m / mát# i / Ø
'pine tree, too' 'pine tree'

The enclitic -n has occurring before it the same alternants as -m does, but itself has an alternant -nyi- that appears before -m, conforming, just as the other words do, to a rule that a morph before -m must have its vowel-final form if it participates in the CV / C alternation. But the form of the noun before -nyi- is the apocopated form:(17)

sakyí-n 'to the front' sák-nyi-m 'to the front, too'
kyinu-n^ 'to the clothing' kyin-nyi-m^ 'to the clothing, too'
matí-n 'to the pine tree' mát-nyi-m 'to the pine tree, too'

Let us arrange some forms to get a better idea of what is going on:

word-finally	before a syllable- final consonant	before another syllable
...-m#	sakyím	sáknyim
...-n#	sáknyim	
sák#		

Let us pause to note that only etymological high vowels participate in this alternation of a vowel with zero. Neither yi nor the subset V-1 of u or i is ever preceded by an aspirated aspirable consonant in environments where aspiration suppression is not operative:

(17) See the extended discussion below on Apocope versus Lengthening for more details on forms with -nyi-m.

C'yi :		C'i-l :	
nokyí / nók	'rainbow'	matí / mát	'pine tree'
nukyí / núk	'eaves'	natí / nát	'summer'
yukyí / yúk	'snow'	myití / myít	'three'
matyí / máty	'town'	mutí / mít	'six'
		yatí / yát	'eight'
C'u-l :			
wakú / wák	'frame'		

Note that in the case of ty and sy the y is retained in the transcription, since it signals the palatal quality of the consonant in this case as well as that of the vowel.

The sound change that apparently led to these alternations is statable as follows:

In strings of etymological high vowels, a vowel undergoes apocope in every odd-numbered syllable starting from final position of a phonological word.

Note that this statement excludes the u of -nu '(Subject); of' from the etymological high vowels, since it does not undergo apocope. It must accordingly be reconstructed as *-no. But it is evident that -m 'too, also' is a result of the sound change, but that since it always comes in final position, its precise etymological vowel is unknowable from internal evidence. It is reconstructable either as *-mu or *-mi. Thus kyin-nyí-m^ 'to clothing, too' comes from *kinu-ni-mu/i^.

Now let us introduce a further piece of evidence, and then modify the sound-change statement. In the word wák-nu 'of the frame' the position of apocope (strictly speaking, of syncope) is the second (etymological) syllable from the end. Let us modify the statement as follows:

Apocope/Syncope:

In strings of etymological high vowels, a vowel undergoes apocope/syncope, starting from the last high vowel of the word, and working iteratively backwards; but if the syllable

with the high vowel is closed, the high vowel may not be deleted.

The rider on the sound change statement guarantees every observable shape of nouns as concerns apocope/syncope, given etymological short vowels. Since the loss of a high vowel from the syllable to the right will automatically close its left neighbor, any high vowel in that neighbor is "protected" from the sound change. One may think of this exemption as a conspiracy to keep from having more than two consonants per cluster.(18)

Since the vowels that apocopate come only after unaspirated aspirable consonants in non-neutral environments, it is natural to assume that they are etymological high vowels, as stated above, and furthermore to assume, in all other cases of such Apocope/Syncope (where aspiration is not a clue to etymological vowel height), that the etymological vowel here is high as well. This assumption fills in some more prehistoric phonological space, since it allows us to see that, where di and si are part of Apocopating-type alternations, they pattern with the other apical obstruent ti in being descended from a syllable with *u, namely, *du, *su, (19) and *tu (the latter discussed earlier),

-
- (18) There is a class of near-exceptions to this conspiracy, exemplified by the verb qáppyum 'plays', with the gerund qápti, which one might think should be x qáppti. From its variant qasííbyum, we know that the verb must once have been *asubi#wumi/u', gerund *asubite', with various analogical shifts. See the historical discussion at the end of the verb chapter.
- (19) Nouns with final apocopating si also vary freely with su as a final syllable. I believe that this free variation is due to the influence of Japanese loans with final su that often have a devocalized form [sú] or [s]. This phenomenon has contaminated the Shodon alternation ..si / ..s. An example is basí/ú / bás 'bus'.

respectively. No examples of Apocoping du or t(h)u are to be found, as is expected, since they can only have come from *do and *to, respectively.

2.2.3.2 Consonant Alternations Related to Apocope/Syncope

Where Apocope/Syncope has occurred, certain consonant changes are also observable, giving rise to consonant alternations. Let us examine them now:

	! etymological ! front vowels	! etymological ! back vowels	!
! lamino-	! ..tyi / ..ty	! ..ti / ..t	!
! palatal/!	! ..dyi / ..ty	! ..di / ..t	!
! apical	! ..syi / ..sy	! ..si/u / ..s	!
!	! ..nyi / ..n	! ..nu / ..n	!
!	! ..ryi / ..r	! ..ru / ..r	!
!	! (..ri / ..r)		!
! labial	! ..byi / ..p	! (..pu / ..p)	!
!	! ..myi / ..m		!
! velar	! ..kyi / ..k	! ..ku / ..k	!
!	! ..gyi / ..k		!

First of all it is clear that the vowel color is not always predictable from the vowelless form, except for the fact that it is high. The alternant with the vowel is normally needed in order to reconstruct the pre-vowel. The exceptions are the cases where the lost vowel leaves its trace in the palatal color of the tautosyllabic apical obstruent, that

is, in the alternations involving d, t, and s. The palatal color is expressed by leaving in the y: ty, sy.

Next note that the voicing opposition in all those consonants where it would otherwise be distinctive is neutralized under Apocope in favor of nondistinctive voicelessness. Thus both dyi and tyi alternate with ty, and so on. Note, however, that, since ..pu / ..p is a marginal case that is due to the presence of loan vocabulary, it is always possible to reconstruct a *b, for native vocabulary, where p is found syllable finally. Syllable-initial p is found only in loanwords and native mimetics. The general absence of non-word-initial, syllable-initial p (i.e., ..pV) or ph (i.e., ..phV) is no accident. I assume that original *p has changed to h, hy, or hw, through an earlier stage *f. This voiceless labial fricative is distributed in word initial position precisely where x p would be expected. (On the other hand medial h typically corresponds to NJ k.) The gap x ..mu/..m is purely accidental as far as I know; the gap x ..gu/..k is due to an analogical change invisible to internal reconstruction.(20)

2.2.3.3 Summary of Phenomena Relating to Apocope/Syncope

To review, then, the changes are (with examples of alternants):

1. labial

(20) Comparative evidence shows what has happened. Compare Sd do(o)k(u)^ 'tool' with Sr doogu^ '[id.]'. It is evident that Shodon once had *..g.. here, but that the word was reanalyzed on the model of the much-more-common alternation ..ku/..k. Both words are early Sino-Japanese borrowings; modern Japanese has doogú '[id.]'.

a) obstruent

- (*..pu > ..pu / ..p thoopu^ / thop^ 'beancurd')
- *..bu > ..bu / ..p habú / háp 'snake'
- *..bi > ..byi / ..p kubyí / kúp 'neck'

b) nasal

- *..mi > ..myi / ..m khamyí / khám 'paper'

2. apical

a) stop with front vowel

- *..ti > ..tyi / ..ty hatyí / háty 'bee'
- *..di > ..dyi / ..ty khadyí / kháty 'rudder'

b) stop with back vowel

- *..tu > ..ti / ..t matí / mát 'pine tree'
- *..du > ..di / ..t midí / mít 'water'

c) sibilant with front vowel

- *..si > ..syi / ..sy husyí / húsy 'star'

d) sibilant with back vowel

- *..su > ..si/u / ..s wusí/ú / wús 'male (animal)'

e) nasal

- *..ni > ..nyi / ..n qanyí / qán 'ant'
- *..nu > ..nu / ..n qyinu^ / qyin^ 'dog'

f) liquid

- *..ri > ..ryi / ..r thuryí / thúr 'bird'
- *..ru > ..ru / ..r tirú / tír 'fishing hook'

g) velar

- *..ki > ..kyi / ..k nukyí / núk 'eaves'
- *..ku > ..ku / ..k wakú / wák 'frame'

- *..gi > ..gyi / ..k kugyí / kúk 'nail'

In the next section it will become clear that etymological non-high vowels do not Apocopate, so that it is possible to tell these vowels apart from etymological high (short) vowels, according to their alternation class, assuming that they alternate.

2.2.3.4 Long-Vowel/Short-Vowel Alternations

In this section I show that a sound change lengthening non-high vowels in open syllables occurred in Shodon, resulting in long-vowel/short-vowel alternations in the modern dialect. In addition, some high vowels had previously been lengthened, and behaved just like the later-lengthened vowels. Finally, I show how the shapes of mid-heavy apocopating trisyllables with etymologically high second and third vowels came into being.

2.2.3.4.1 The Stable and Alternating Subtypes

We saw that etymological short vowels alternated with zero under certain conditions, and that two major results of such an alternation were closed syllables in general and the class of apocopating dissyllabic nouns in particular. There is another class of dissyllabic nouns that has an alternation involving vowels, in this case a long-vowel/short-vowel alternation. The type was discussed earlier in Section 2.2.3. An example is sehée / sehé-m 'rice wine (, too)'. When a long-vowel syllable is closed, the closure results in the shortening of the vowel. This fact appears to reflect history: when short high

vowels underwent Apocope, forcing the remaining consonant into the preceding long-vowel syllable, that syllable became double-heavy, and the result was an automatic shortening of the vowel. We may express this in the following formulation of the sound change:

Vowel Shortening:

$$[+\text{syll}] > [-\text{long}] / \text{ ______ } [-\text{syll}] \left\{ \begin{array}{l} [-\text{syll}] \\ \#\# \end{array} \right\}$$

(A vowel shortens when followed by two consonants, or by a consonant and a word boundary, i.e., by a consonant in the same syllable.)

We may next fruitfully ask, was the vowel always long, or is its length predictable? The answer is that it is predictable, but we will have to investigate a number of pieces of evidence. First there is the relation of vowel length to the place in the word in which it is found. Next there is the relation of vowel length to etymological vowel height. Then there is its relation to accent category.

For the time being I will assume that the alternant that has the longer vowel is the alternant that preserves more about the history of the word, that is, is closer to the older form. This assumption will allow us to see the distribution of vowel length at its broadest extent.

Except for one-syllable words (numbering 54 native words in Martin's (1970) word-type lists, plus 11 Sino-Japanese borrowings, pp. 116-120), which all have an alternant with a long vowel, we find that, when long vowels do appear, they do so overwhelmingly in second syllables (319 examples). The number that appear in first syllables of polysyllabic words is minuscule (two examples not attributable to

compounding, Contraction, or borrowing, with a total of 24 examples), and the numbers that appear in third or later syllables, likewise (eight examples).

2.2.3.4.1.1 The Non-Alternating Subtype

Of the non-alternating subtype, there are the following shape types (with Martin's type numbers), with an example of each:

1. Non-alternating vowel length in first syllable:
 - (7a) CVVCV qyeeda[^] interval(21)
 - (7b) CVVCV(V) syeehe(e)[^] cough(22)
 - (9) CVVCVC(V) syuuduk(yi)'[^] tide-time(23)
2. Non-alternating vowel length in second syllable:
 - (11c) CVCVVCV thykyáára strength(24)
 - (12a) CVCVVCVC(V) muraasak(yi)[^] purple(25)
 - (13) CVCVVCVCV(V) thahaayado(o)[^] window

2.2.3.4.1.2 The Alternating Subtype

The alternating subtype also has several noun shape types in it. They are, with a tonic and atonic example of each (if available):

1. Alternating length in first syllable:

- (21) See the Appendix for details on this class.
- (22) See the Appendix for details on this class.
- (23) See the Appendix for details on this class.
- (24) See the Appendix for details on this class.
- (25) See the Appendix for details on this class.

- (1) CV(V) hú(u) sail,
 hwa(a)^ tooth(26)
- (6) CV(V)C(V) [no tonic examples],
 gyuubyi^/gyup^ kind of
 cake(27)

2. Alternating length in second syllable:

- (4) CVCV(V) haná(a) nose,
 busyi(i)^ bamboo joint(28)
- (10) CVCV(V)C(V) khibú(ú)sy(i) smoke,
 qadi(i)m(yi)^ pestle(29)
- (7b) CVVCV(V) khyáági(i) black pine,(30)
 syeehe(e)^ cough
- CVCCV(V) [no native tonic examples],
 qamma(a)^ mother old ,
 grandmother [new](31)

3. Alternating length in third syllable:

- (8a) CVCCVCV(V) [no tonic examples],
 qarsama(a)^ appearance
- (8b) CVCVCV(V) [no tonic examples],
 qurathya(a)^ boards,
 boarding
- (13) CVCVVCV(V) [no tonic examples],
 quraithya(a)^ boards,
 boarding

4. Alternating length in fourth syllable:

(26) See the Appendix for details on this class.

(27) See the Appendix for details on this class.

(28) See the Appendix for details on this class.

(29) These are discussed at length in the text below.

(30) As explained above, khyáági(i) is the only native example of a tonic word of this class, and it is a compound.

(31) See the Appendix for details on this class.

- (13) CVCVVCVCV(V) [no tonic examples],
 thahaayado(o)^ window

2.2.3.4.2 Non-second-syllable Cases

Here let us examine the cases where vowel length appears somewhere other than in the second syllable. This investigation divides into two parts, first-syllable cases, and third-and-later-syllable cases.

2.2.3.4.2.1 First-syllable Cases

The first-syllable cases divide into two parts, 1) single-syllable words, and 2) multi-syllable words.

Note that all single-syllable words have a long vowel alternant. This can be accounted for by assuming a morpheme structure condition for Shodon dialect:

Every phonological word must consist of at least two moras. Thus for the word hwá(a) 'leaf', there can be both the form ##hwáa##, without any enclitics, and ##hwá-m##, for example, with a vowel-shortening enclitic. Both forms adhere to the morpheme structure condition, since they both consist of two moras. All single-syllable words are thus handled by this condition, which is not the same as either of the two vowel-lengthening sound changes, to be discussed below, for words of two syllables or more.

There are also cases of ##CVV.. where the first syllable is not the only one. Such cases must be handled by some means other than the above-mentioned morpheme structure condition. They include the

following noun types:(32)

No.	Type	Example	Gloss	No. of Irreducible examples
(7a)	CV V CV	(qyeeda [^]	'interval'	0
(7b)	CV V CV(V)	syeehe(e) [^]	'cough'	1
(9)	CV V CVC(V)	(syuuduk(yi)'/ [^]	'tide time')	0
(6)	CV(V)C(V)	qo(o)k(yi) [^]	'fan'	2

There is a remainder of three: syeehe(e)[^] 'cough', which can be treated as a compound (syee#he(e)[^]), and qo(o)k(yi)[^] 'fan' and kho(o)r(yi)[^] 'ice', which are deverbals and thus analyzable as having an affix boundary: qo(o)k(+yi)[^] and kho(o)r(+yi)[^]. The second item is in any case a recent loan; see the verb chapter for details in the discussion of infinitives.

2.2.3.4.2.2 Third-and-Later-Syllable Cases

The third-syllable cases are all of the alternating type:

No.	Type	Example	Gloss	No. of Examples
(8a)	CVCCVCV(V)	qarsama(a) [^]	'appearance'	2
(8b)	CVCVCV(V)	qurathya(a) [^]	'boards, etc.'	1
(13)	CVCVVCV(V)	quraithya(a) [^]	'boards, etc.'	1

The final two examples are countable as variants and all examples (including the other of (8a), qaddyaha(a)[^] 'wooden clogs') are compounds. The words require a compound boundary in order to explain their shape:

(32) Despite the candidacy of syeehe(e)[^] for contraction, I do not exclude it, on the grounds that it is the older member of the doublet syeehe(e)[^] : syekyí(i), the latter of which is a borrowing from Japanese sekí '[id.]', and thus the former member of the doublet is very unlikely to be a contraction. Nonetheless it can be treated as a compound: syee#he(e)[^].

```

qar#sama(a)^ 'appearance' <- qar(i)^ 'being' + sama(a)~ 'way'
  [the latter is not found as a separate word]
qad#dyaha(a)^ 'wooden clogs' <- qas/t/dy(i)^ '?'
  + -"-thaha(a)^ 'tall, high'
qura#(i)thya(a)^ 'boards' <- qura(a)^ 'back;lining'
  + qyitha(a)^ 'board'

```

The first word, qar#sama(a)^, is very close in shape to NJ arísama '[id.]', and we have no trouble in seeing that it must be composed of two morphemes. The result is that length is seen to be in the second syllable of the second morpheme.

The second word, qad#dyaha(a)^, has as its second element the morpheme thaha(a)-^, and indeed clogs are high/tall. The first member is another story. In NJ, of course, the word is asida^ '[id.]', and is written with the character for 'foot, leg' to represent asi-. But the Sd word for 'foot, leg' is hagi(i)^, so there is no guarantee that Sd speakers used the first morpheme in the analogy required to explain this word. The word must originally have been *asida^, nearly the same as in NJ, before Progressive Palatalization and Syncope (see Shuri qasyizya^ '[id.]', and the discussion of Syncope below), and then Sd speakers at some point added the extra syllable required to reanalyze ..#dya into ..#dyaha(a)^ 'tall, high'. Again the length is found in the second syllable of the second morpheme.

Finally, the free variants qura#thya(a)^ and qura#ithya(a)^ are also transparently compounds. The first variant can be seen as having a monosyllabic second member, and this works fine because of the monosyllabic-noun morpheme structure condition mentioned above. The second morpheme of the second variant is dissyllabic, and again the result is that vowel length is restricted to second-syllable position.

The problem lies ultimately in the fact that the second syllable of the first morpheme is short, where, as we shall shortly see, length is expected. It may actually be that there is a sound change that has elided the glottal stop of the free-standing form, "extruding" the vowel *yi* into the preceding syllable and morpheme, where it becomes part of the diphthong *ai*, with the resultant form *qurai#thya(a)^*. The sound change is needed for this one form only, though, and the other variant is still unexplained. I leave the discussion at this point.

2.2.3.4.2.3 Second-Syllable Cases

The remaining cases are all of the second-syllable type, one subtype stable and one alternating with an identical short vowel.

The stable type always has an etymological non-high vowel after the long vowel, or else it once had a compound boundary, and it is always at least three syllables long:

With three syllables (no boundary):

thykyáára	'strength'	(*..ra)
khohóoro [^]	'heart'	(*..rɔ)
qasaati [^]	'day after tomorrow'	(*..te)
qamaagu [^]	'sweets'	(*..go)

With four syllables (no boundary after long vowel):

khohóono+ ^{t(i)}	'nine'	(*..nɔ..)
muraasak(yi) [^]	'purple'	(*..sa..)
syiqaasati [^]	'three days hence'	(*..sa..)
yuhwáánati	'three days ago'	(*..na..)

With four syllables (historical boundary after (etymological high) vowel):

qaraa(#)mun(u) [^]	'new thing'	(?#mu../?#mo..)
nataa(#)wun(u) [^]	'small axe'	(?#wu../?#wo..)
khanaa(#)tity(i) [^]	'hammer'	(*#tu..; cf. <u>thtyi(i)</u> [^] 'mallet')

Since there is no Syncope or Apocope of the following vowel, there is no forcing of the remaining consonant into the preceding syllable, and thus no shortening of the long vowel. A syllable after a word or a compound boundary (## or #) is exempt from Syncope, just as surely as if it had a non-high vowel, so the effect is the same as if the following vowel were in the same word and non-high.

The other type is the alternating type, and, as was noted earlier, the alternation is caused by Apocope or Syncope of the following vowel. Some examples are:

Trisyllabic nouns with etymological non-high long vowels:

khamák / khamááku-m 'straw bag'
wunak[^] / wunaaku-m[^] 'woman'

Trisyllabic nouns with etymological high long vowels:

matír / matífryi-m 'festival'
qakup[^] / qakuubyi-m[^] 'yawn'

Dissyllabic nouns with etymological non-high long vowels:

mumó-m / mumóo 'peach'
mayo-m[^] / mayoo[^] 'eyebrow'

Dissyllabic atonic nouns with etymological high vowels:

gakyi-m[^] / gakyii[^] 'oyster'
buku-m[^] / bukuu[^] 'bubble'

2.2.3.4.3 Conclusion: Original Automatic Lengthening of Second Vowel

The conclusion, then, is inescapable: since it can be seen that only single-syllable nouns and a large subset of two-or-more-syllable nouns have long vowels, if we include those cases where second members of compounds are also long, then we can reconstruct a stage of the language when there were no long vowels (so far as we can tell up to this point), and posit a sound change that lengthened second syllables, as follows (it will be modified shortly):

Lengthening:

V > [+long] / ##CV.C__.

(A vowel lengthens when it is in the second syllable of a word, and that syllable is open.)

This may not seem to be enough to say if we recall that both Apocope and Syncope may have gotten rid of the etymological second vowel. The problem is easily taken care of, however, if we simply order the Apocope/Syncope sound change before the Lengthening sound change:

	*kyinu [^]	*tyikyára
Apocope/Syncope		
	*kyin [^]	*tyikyára
Lengthening		
	*kyin [^]	*tyikyáára
(Other changes)		
	*kyin [^]	*thykyáára

The above solution takes care of the following types:

khamák / khamááku-m
wunak[^] / wunaaku-m[^]
mumó-m / mumóo
mayo-m[^] / mayoo[^]

since these transparently have non-high vowels in their second syllables. It is also clear that Vowel Raising must occur after Apocope/Syncope, since it does not feed the change. There is no evidence for its order in relation to Lengthening, so I arbitrarily put it before Lengthening:

Apocope/Syncope (iterative)
Raising
Lengthening

Note that up to this point we do not require the Vowel-shortening sound change posited earlier in 2.2.3.4.1.

Now a question remains: What about the trisyllabic nouns matí(i)r(yi-m) (< *matú(?ú)ri-mu/i) and qaku(u")p(yi-m)[^] (< *aku(?u)bi-mu/i[^])--that is, trisyllables of the etymological type

*CVCI(?I)CI, both tonic and atonic (I = etymological high vowel, E = etymological nonhigh vowel)? And what about gakyi-m[^] / gakyii[^] (< *gaki(?i)(-mu/i)[^]) and buku-m[^] / bukuu[^] (< *bu/oku(?u)(-mu/i)[^])--that is, dissyllables of the etymological type CVCI(?I)[^], atonic only?

It is not possible to have these high vowels lengthen after Apocope/Syncope, because they will have disappeared. Therefore two tacks are open to explain them. Either (1) the vowels were always long in the first place, or (2) there was a Lengthening-1 before Apocope/Syncope for these particular cases, followed by a Lengthening-2 after Apocope/Syncope. I will examine each of the alternatives in turn.

First let us examine the pros and cons of the first alternative, namely, the original-vowel hypothesis. This is appealing on the grounds that it is conservative and requires a minimum number of assumptions about sound changes. Occam's razor suggests that we ought to pick the most straightforward solution. Some questions require answering, however. (1) Why is it that the vowel length always appears (when it does--after all, these are alternating CVV : CV words) in the second syllable? If it is predicted to occur there, then why not just get rid of it in the earliest reconstructed form? (2) Why is it that in trisyllables both tonics and atonics have long etymologically high second vowels, but that in dissyllables only the atonics have long vowels, but the tonics have short vowels that Apocopate?

First of all I will focus on the atonics, for which there is a more ready answer, and then I will return to a consideration of the tonic dissyllables.

Shodon dialect has a tonic/atonic distinction, and for tonic nouns, the placement of the tonic accent is always predictable. Nevertheless, we do have to place it, since there is only one correct place to put it. So, while placement of the tonic accent is entirely predictable, the tonicity (or not) of a word is arbitrary--it either belongs to the tonic or atonic class.

Similarly we cannot predict atonicity, but if we know that a word is atonic, then we can place vowel length in the appropriate place, namely, the second syllable, at least for any non-topheavy dissyllable or *CVCICI trisyllable. If vowel length is the par-excellence feature of atonics, then we might feel justified in deciding that it was always there. But there is both internal and external evidence to suggest that it was not, and that will result in our having to opt for the two-stage vowel-lengthening hypothesis.

One piece of internal evidence is the fact that nouns of the form *CVCICE uniformly show up in NSd as CVCCV:

qapra[^] (x qabuura[^]) < *abura[^]
 gutyrya[^] (x gut/dyiira[^]) < *gut/dira[^]

They would have been x CVCVVCV if the second vowel had been long, as in the parentheses.

Another internal piece of evidence is the doublet bikiy(i)[^] // byikkya[^] 'frog' (the former is considered a newer version than the latter, which is an "old term" [Martin 1970:117B, 118B]). In terms of morphemic constituents, bikiy(i)[^] is atomic, and byikkya[^] is composed of *biki[^] 'frog' + +a '(animal suffix)'. The formation of the word is the same as in the addition of the topic enclitic -(y)a to an

apocopating dissyllable. Cf. háp 'snake' / habú-m 'snake, too' / háp-pya 'as for snakes'. The formation of byikkya^ 'frog' occurred before Lengthening-2, on the supposition that long vowels will not Apocopate/Syncopate.

One more internal piece of evidence is the catalectic adjectives, which have three alternants: (1) an Apocopated form, (2) a short-vowel form, and (3) a long-vowel form. See the discussion in the chapter on Shodon adjectives. Again I assume that the short-vowel form is original.

There are two other, non-internal pieces of evidence: (1) We know by comparison with NJ and other Rk dialects that the words khó(o) 'river' and yigaawa^ '(water) well' are related:

khó(o) < *kawa'
 yigaawa^ < *ye/i--kawa^ = *ye/i^ 'well' + *kawa' 'river'

The compound yigaawa^ is very old (that is, it has no internal boundaries), otherwise it would be yii#go(o)^. This pair of words is evidence for Monophthongization of a complex *..awa sequence to ..o(o). But that Monophthongization is very unlikely to have occurred if either of the constituent vowels had been long in the first place. Note that khó(o) is a tonic word, and we suppose that it would have been a candidate for the Lengthening-2 sound change, resulting in x khawá(a). Since that never occurred, we assume that Monophthongization must have preceded Lengthening-2. But did Monophthongization also precede Lengthening-1? Needless to say, yigaawa^ is proof that it did not, since the change from *..#gawa~ to ..gaawa obviously deprived Monophthongization of its input. We would have gotten x yigo(o)^

otherwise. Note that the first element, *ye/i[^], has given its accent to this compound as a whole, freeing the second element to act as part of an atonic noun. Lengthening-1, then, is real, because it applied to the first vowel of a dissyllabic morpheme, keeping Monophthongization from occurring.

Finally, there is the case of Homorganic Vowel Drop, knowable only through comparison with other dialects. This sound change drops the second of two identical vowels in contiguous syllables, regardless of vowel height (but is sporadic):

NJ odoróku 'is surprised'	: Sd qudukkyum [^] ' id. '
	< *qudurk- [^]
	< *odorok- [^]
NJ oboreru [^] 'drowns'	: Sd qupre dyin(yi/u) [^] 'drowning'
	< *obrę.. [^]
	< *obore.. [^]
NJ kataná 'knife, sword'	: Sd khatna [^] 'sword'
	< *katna [^]
	< *katana [^]

If one of the two vowels had originally been long, they should not have dropped, since they would not have been identical. (It is also less likely that a long vowel will drop in any case.)

So, there was a sound change Lengthening-1, and it appears to have applied to second syllables of atonic nouns regardless of vowel height, with the stated exception of *CVCICE[^]. In fact we can state the three-syllable case more exactly:

In nouns etymologically three syllables long or longer, lengthening occurred on high-vowel second syllables if the following vowel was high and not preceded by a morpheme boundary, while Syncope occurred if the following vowel was nonhigh and not preceded by a morpheme boundary.

This phenomenon must remain a mystery for the time being.

Now let us briefly return to the apocopating dissyllables. Naturally enough, we do not expect to have any original high-second-vowel atonics, since these are supposedly all members of the expansive dissyllable category (i.e., CVCV(V)). Of the ones listed in Martin (1970:116B-117A), only six are atonic, while 68 are tonic:(33)

- (1) byin(u)^ 'rouge' (//byini(i)^)
- (2) kyin(u)^ 'clothing' (cf. kyinu(u)^ 'silk')
- (3) myen(u)^ 'mask' [SJ]
- (4) qyin(u)^ 'dog' (//qyinu#..^)
- (5) syin(u)^ 'plug, cork' [SJ]
- (6) wun(u)^ 'pickaxe' (cf. nataawun(u)^ 'small axe')

Two of the atonics are Sino-Japanese loans, leaving four native words to deal with. Three of those form some kind of doublet with a long-vowel variant, and the last one is seen to be in second position in a compound that has lost its compound boundary, and thus not a candidate for Lengthening-1. (Parenthetically, we can see that the word has to have been formed before Lengthening-1. The sound change thus serves as a handy way to tell how early a compound was formed.) In fact it may well be that all four of the words in question have been detached from second position and have assumed a new independent life, but without reverting to expansive dissyllable status. This helps explain the high incidence of doublets. (But compare a competing explanation discussed in the verb chapter, having to do with nasals and high back vowels.)

As in the case of the tonics above, it would strengthen the generalization so far presented about the relation of Lengthening-1 to atonics and that of Lengthening-2 to tonics if we can make the claim

(33) I have added one more tonic example, mun(u)^ 'thing; person, one', from Martin 1970:104A and SdELex.

that there were no original Sd words with the shape *CVCI' that became CVCV(V), i.e., expansive dissyllables, in NSd, since they should have automatically undergone Apocope/Syncope and become apocopating dissyllables, the same dissyllabic noun category treated in the last paragraph.

There are nine non-SJ ..yí(i) tonics in the expansive dissyllable category, one unambiguous *ú tonic, and four possible *ú tonics. There are 40 atonics with unambiguous *u, and 18 with possible *u. In chart form that is:

	..yí(i)	unambiguous *u	possible *u
Atonics	40	4	18
Tonics	9	1	4
	--	-	--
Total	49	5	22

The tonics are:

..yí(i):

- (1) hudyí(i) 'wisteria' (also t[?h]o(o)^)
- (2) qanyí(i) 'one's own older brother' (// qanyó(o))
- (3) qadyí(i) 'flavor' (// qa(")ty(i)' in idioms)
- (4) thuryí(i) 'shrine gate' (cf. thur(yi)' 'bird',
NJ torii^ 'shrine gate')
- (5) wudyí(i) 'uncle' (cf. wubá(a) 'aunt')
- (6) syekyí(i) 'cough' (cf. syeehe(e)^ '[id.]')
- (7) hyigyí(i) 'beard' (possible progressive
palatalization of *..gé)
- (8) myikyí(i) 'trunk (of tree)' (progressive palatalization
not possible: no aspiration)
- (9) tyiryí(i) 'dirt'

..ú(u):

- (1) skú(u) // sukú(u) 'bottom'
(lack of Velar Lenition, despite *o in first syllable (?),
showing *ku, not x *ko)

*ú: none

ambiguous:

- (1) huyú(u) 'winter'
- (2) khubú(u) 'spider'
- (3) tibú(u) 'jar'
- (4) tirú(u) 'crane'

I believe that qadyí(i), thuryí(i), and syekyí(i) are loans, while qanyí(i) and wudyí(i) are analogical modifications; hyigyí(i) and tyiryí(i) may have been Progressively Palatalized (the latter may also have been analogically modified); that leaves hudyí(i) and myikyí(i) as anomalous residue among the front-vowel cases. There is no reason why they cannot be classed as loans as well. As for the back-vowel case skú(u), if its free-variant vowel u in the first syllable can be seen as an instance of the free variation of i/u seen after s in the apocopating dissyllables, then it is not anomalous--see the Appendix under skú(u) and stu(u)^ in the section "Expansive Dissyllables" for details.

The one item with *u, skú(u) // sukú(u), would have been x suhú(u) (with Velar Lenition) had it been from *soko', to accord with NJ soko^. If it is an ancestral form, it must be *soku', but with anomalous second-syllable vowel length. Perhaps it is a post-Velar-Lenition borrowing from J, with Aspiration Suppression, borrowed as *soko'.

Thus it is clear that, for pre-borrowing dissyllabic nouns with etymological high vowel, there really is a total complementary distribution between tonic and atonic, and Apocotation and Lengthening, so that we may say that tonic = apocopating and atonic = lengthening, for the dissyllabic noun types in question:

*CVCI' > CVC(V)'
 *CVCI^ > CVCV(V)^

Dissyllabic nouns with original nonhigh vowels (i.e., CVCE'/^) all became the CVCV(V) type, regardless of their tonicity, since Lengthening-1 lengthened the second syllable of all dissyllabic atonics regardless of vowel height (i.e., both *CVCI^ and *CVCE^), and since

Lengthening-2 lengthened all vowels in remaining open second syllables, which is to say those that had not Apocopated/Syncopated. These latter were necessarily the vowels of the second syllables of tonic nouns, in the case of the dissyllabics being discussed here (i.e., *CVCE' types).

Now we are ready to discuss the mid-heavy apocopating contractile trisyllables and their shapes (*CVCECI and *CVCICI). There is a total of 65 of these in Martin 1970:119b-120a. Of them, 29 are tonic and 36 atonic. Besides categorizing them as tonic or atonic, we can cross-categorize them as *CVCICI, *CVCECI, or indeterminate, *CVCVCI:

Mid-heavy Apocopating Contractile Trisyllables:

	Tonic		Atonic	=	
*CVCICI	8	+	2	=	10
*CVCVCI	5	+	10	=	15
*CVCECI	16	+	24	=	40
	--		--		--
	29	+	36	=	65

The eight *CVCICI tonics consist of:

- (1) thakyí(i)k(yi) 'firewood' "<" *takíki
(loan: wrong shape of word for 'wood')
- (2) khibú(ú)sy(i) 'smoke' < *kebúsi
(cf. catalectic adjective khi(")p(u(u))-^ 'smoky')
- (3) manyí(i)sy(i) 'west' < *manísi <- *ma+ 'true' + nisi' *'west'
(cf. nyisy(i)' 'west; north')
- (4) qahyí(i)r(i) 'duck' "<" *afíre
(loan: anomalous ..r(i))
- (5) matí(i)r(yi) 'festival' < *matúri
- (6) khagyí(i)r(yi) 'limit' < *kagíri
- (7) qyití(i)t(i) 'five' < *itútu
(// qyiti(i)t(i)^)
- (8) qasí(i)p(yi) 'game, holiday' < *asúbi
(cf. qáppyum // qasíbyum // qasúbyum 'plays')

Items (1) and (4) are probably loans. The form *takíki is analyzable as *taki' 'burning' and *ki~ 'wood, tree', but the latter morpheme is probably Japanese, not Ryukyuan. The Sd word for 'tree' is khi(i)^ < *ke^ . See Hattori 1976 and Serafim 1977B for details on the

vowel height. Item (4), qahyí(f)r(i), is very similar to NJ ahíru^, 'duck', and an anomalous form for Sd in its having final apocopatable i, something which should only be seen in verbs or deverbal nouns because of analogical change from *yi. (See "Shodon Verbs.") I assume it is a loan from NJ.

That leaves six tonic nouns of the shape *CVCICI that are assumed to be original. We know that khibú(ú)sy(i) must have had a high vowel because of its catalectic cousin khip^ / khibu-^ / khibuu-^ 'smoky', even though non-apocopating ..bu.. as such is indeterminate between *bu and *bo. Item (8), qasí(f")p(yi) has a verbal cousin from which it is derived, and since the verb has an apocopated free alternant, we know that sí(i) here is from *sú, not *sé.

The two *CVCICI atonics are:

- (1) qyiti(i)t(i)^ 'five' < *itutu^
 (// qyití(f)t(i))
- (2) qaku(u")p(yi)^ 'yawn' < *akubi^

I assume that both are original, and that the absence of *Ci in second-syllable position is purely accidental.

There remain 15 indeterminate cases, of which surely some are *..CI.. and some *..CE..:

Tonic:

- (1) qurú(ú)sy(i) 'lacquer' < *u/oró/úsi
- (2) tirú(ú)k(yi) 'uvula; penis' < *turú/óki
 (cf. NJ turugí 'sword')
- (3) tibú(ú)sy(i) 'lap' < *tubú/ósi
- (4) hugú(ú)r(yi) 'testicles' < *fugú/óri
 (The Martin gloss 'penis' corrected with reference to
 Kanehisa 1963:431)
- (5) nyigyí(f)r(yi) 'right (hand)' < *nigí/éri
 (progressive palatalization possible)

Atonic:

- (6) khuyu(u)m(yi)^ 'almanac' < *koyo/umi^
- (7) qadi(i)m(yi)^ 'pestle' < *adu/emi^
- (8) nidi(i)m(yi)^ 'rat' < *nedu/emi^

- (9) thidi(i)m(yi)^ 'drum' < *tedu/emi^
 (When compared with NJ tuzumí, thi.. is anomalous.)
- (10) qadi(i)k(yi)^ 'red bean' < *adu/eki^
- (11) thanu(u)k(yi)^ 'badger' < *tanu/oki^
- (12) thasi(i)k(yi)^ 'sleeve-tie' < *tasu/eki^
- (13) hanu(u)s(i)^ 'sweet potato' < *fanu/osu^
- (14) kiyu(u)r(yi)^ 'cucumber' < *kiyu/ori^
 (cf. wuryi(i)^ '[id.]')
- (15) haru(u")ty(i)^ 'kindred' < *faru/odi^

Two words with NSd high vowels in middle position are not included because the fact that they have undergone progressive palatalization shows that they are with original *..CE..:

- (1) syryú(ú)sy(i) 'mark' < *sirósi
- (2) qyidyu(u)m(yi)^ 'fountain' < *idómi

Such reconstructions are at odds with NJ sirusi^ '[id.]' and izumi^ / ízumi '[id.]', respectively. But since progressive palatalization does not affect following high vowels, we are forced to accept the results.

It is clear, then, that *CVCICI'/'^ cannot be explained away. Furthermore, both tonic and atonic words in this category share exactly the same non-tonal word-structure features: V/∅ in the third syllable, and attendant VV/V in the second. The longer form, which preserves much more historical information, is heard only when the enclitics -n or -m are used.

The problem with having *CVCICI become CVCV(V)C(V) is that it does not accord with the Apocope/Syncope sound change as it was formulated earlier in this chapter. We would have expected x CVCVC / x CVCCV, an unknown type. Take the following cases:

Pre-form	Predicted	Actual	+/- Same
*CVCICI	CVCVC	CVCVC	+
*kagíri	khagyír	khagyír	
*CVCICI-CI	CVCCV-C	CVCVVCV-C	-
*kagíri-mu	x khákryi-m	khagyíryi-m	
*CVCICI-CE	CVCVC-CV	CVCVC-CV	+
*kagíri-no	khagyír-nu	khagyír-nu	
*CVCICI-CI-CI	CVCVC-CV-C	CVCVC-CV-C	+
*kagíri-ni-mu	khagyír-nyí-m	khagyír-nyí-m	

There are three possibilities for what happened: (1) the original Apocope/Syncope sound change was sensitive to morpheme boundaries; (2) it occurred only once per phonological word, but a later morphological reanalysis put in extra changes, resulting in the formulation used earlier in this chapter for dissyllabic apocopating nouns (*CVCI), i.e., Apocope/Syncope; or, (3) accent/length shift resulted in the observed phenomena, including the mysterious *CVCCV forms. Since all three explanations are possible, and since I know of no data to conclusively choose one of them over the others, I discuss each in turn.

Looking at possibility (1) first, a sound change sensitive to morpheme boundaries takes care of everything in one fell swoop, since it can be tailored to allow a change only on the first encountered high vowel in each morpheme (working from the end of the word), taking care of the *CVCICI types handily, but also accounting for *CVCI.

(1) *CVCI'	> *CVC'	> CVC'	kúk
(2) *CVCI-CI'	> *CVCI-C'	> CVCV-C'	kugyí-m
(3) *CVCI-CI-CI'	> *CVC-CI-C'	> CVC-CV-C'	kúk-nyí-m
(4) *CVCICI	> *CVCIC	> CVCVC	khagyír
(5) *CVCICI-CI	> *CVCICI-C	> CVCVVCV-C	khagyíryi-m
(6) *CVCICI-CI-CI	> *CVCIC-CI-C	> CVCVC-CV-C	khagyír-nyí-m

The sound change would be stated thus:

Working iteratively from right to left, inspect the first high vowel in a morpheme, and if it is in an open syllable Apocopate/Syncope it.

The second possibility would work like this: First an Apocope/Syncope sound change that deleted only the first high vowel it found, working from the right, would operate. Then analogy would work on alternations to make them conform to what is seen today, always modeled on the form of the utterance without an enclitic:

- (1) *CVCI' > *CVC' > CVC'
 (2) *CVCI-CI' > *CVCI-C' > CVCI-C'
 (3) *CVCI-CI-CI' > *CVCI-CI-C' -> CVC-CI-C'
 (4) *CVCICI > *CVCIC > CVCIC
 (5) *CVCICI-CI > *CVCICI-C > CVCICI-C
 (6) *CVCICI-CI-CI > CVCICI-CI-C -> CVCIC-CI-C
 (Analogy is shown by "->".)

The analogy would operate to the left of the boundary environment: if it was possible to Apocopate the vowel, it would be Apocopated. It would not be Apocopated if the syllable was already closed, but these changes would only occur to the left of a boundary, since the locus of the analogy would be the free form itself, without any enclitics.

Analogical Apocope 1:

+--+
 CVC!Ø!
 CVC!I!-CI-C -> CVCØ-CI-C
 +--+

The same sort of analogy would operate for words like qaknye^ 'shopping' as follows:

Analogical Apocope 2:

+--+
 CVC!Ø!CV
 CVC!V!CV-C -> CVCØCV-C
 +--+

The analogy would work only once per morpheme, so that forms like khákryi- would be impossible. This impossibility is automatically predicted by the fact that the sound change itself cannot produce it.

But, again, why *CVCICE words (such as qaknye[^] < *akinq[^]) should have Syncopated at all is still not within the scope of either of the above explanations.

Next, let us go back to questions of accent and vowel length, especially alternations in placement of tonic accent, and a reconsideration of the types *CVCICE and *CVCICI.

Note that there is an alternation of tonic accents, left undiscussed as a historical phenomenon until now. Until this point I had allowed the assumption to stand that the accent was originally on the second syllable, and that it had shifted to the initial syllable upon Apocope/Syncope. Thus the following Shifts of tonic accent would occur:

*kugyí > kúk 'nail'
 *wakú > wák 'frame'

With the above sound changes either hypothesis (1) or (2) above will take care of the observed phenomena. We continue to need an explanation for there being no loss of second-syllable high vowels when the third syllable is also high (*CVCíCI > CVCíC), and either of the two hypotheses thus far presented supplies one.

But can we not then say something similar about length and what happened to it? That is to say, since tonic accent and length are usually on the same syllable, and since length is a suprasegmental phenomenon just as surely as accent is, why not assume that length was also taken and moved to another syllable when Apocope/Syncope happened? Such a length Shift would not apply to the type *CVCII[^], but it would apply to *CVCIIICE[^], the category that has been troubling us so far. The

result might be either *CVVCICE or *CVCICEE before Apocope/Syncope, if the Shift sound change was actually ordered before Apocope/Syncope, or just *CVVCCE or *CVCCEE if the sound changes were concurrent. In any case, we need a sound change ordered after these that shortens the new long vowel, and this accords perfectly with the facts, since we see that in NSd, only words with compound boundaries actually allow vowel length after a series of two consonants, and no long vowels at all are allowed before a series of two consonants. I prefer the option of length Shift to the first syllable, because this then resembles tonic accent Shift to the first syllable, a desirable parallel. Other than such a parallel, however, there is simply no evidence at all. This explanation is better than hypotheses (1) and (2) in that it takes care of the type *CVCICE[^], but it suffers from the defect that it cannot account for *CVCI[^], while those two hypotheses do. So far, then, we seem to have a draw in terms of competing explanations. There is one variation on the accent / vowel-length Shift hypothesis that can be made that is equivalent to (3) as so far stated. That is, let us define accent as originally being on the first syllable, and then follow with Lengthening-1, but on the first syllable, not the second. Then both accent and length will Shift to second-syllable position, only in certain cases, followed by Apocope/Syncope and Lengthening-2, as in the following chart:

	L-1	SHIFT	APOC	...	L-2
B:	CVCI	> CVVCI	> CVCII	> CVCII	
	CVCI-CI	> CVVCI-CI	> CVCII-CI	> CVCII-C	
	CVCI-CI-CI	> CVVCI-CI-CI	> CVCII-CI-CI	> CVCII-CI-C	
	CVCICI	> CVVCICI	> CVCIIICI	> CVCIC	
	CVCICI-CI	> CVVCICI-CI	> CVCIIICI-CI	> CVCIIICI-C	
	CVCICI-CI-CI	> CVVCICI-CI-CI	> CVCIIICI-CI-CI	> CVCIC-CI-C	
	CVCICE	> CVVCICE	> CVVCICE	> CVCCE	
A:	CǎCI	> CǎCI	> CǎCI##	> CǎC	
	CǎCI-CI	> CǎCI-CI	> CVCǎ-CI	> CVCǎ-C	
	CǎCI-CI-CI	> CǎCI-CI-CI	> CǎCI-CI-CI	> CǎC-CI-C	
	CǎCICI	> CǎCICI	> CVCǎICI	> CVCǎC	
	CǎCICI-CI	> CǎCICI-CI	> CVCǎICI-CI	> CVCǎICI-C	
	CǎCICI-CI-CI	> CǎCICI-CI-CI	> CVCǎICI-CI-CI	> CVCǎIC-CI-C	
	CǎCICE	> CǎCICE	> CǎCICE	> CǎCCE (> CVCCE)	

This has the advantage that it puts both accent and length out of the way of the second syllable, so that Apocope/Syncope can act on it, but we still have the problem of explaining why atonic *CVCI became *CVCV(V) instead of apocoping, and why accent and length did not move onto the second syllable in *CVCICE. The various problems that each solution presents are thus equivalent. Remember, though, that regardless of the problems presented by any one of the above possible solutions, word shape in pre-Shodon is still entirely reconstructable. We simply do not know why certain changes occurred as they did. I offer one further possibility in the adjective chapter, but it suffers, like all others using only Shodon dialect data, from the fact that there is no conclusive evidence to support it over any of the other choices.

Chapter III
SHODON ADJECTIVES

3.1 ADJECTIVE-STEM SHAPE ALTERNATIONS AND THEIR SOURCES

Section 3.1.1 gives a synchronic treatment of adjective-stem shape types, and section 3.1.2 reconstructs the historical changes that resulted in the observed forms.

Beginning with this chapter I use a new set of conventions for writing Shodon dialect vowel and consonant alternations and accent. Vowels that appear in one alternant but not in another are written with capital letters; consonants that Devoice because of such an alternation are also written in capital letters. Tonicity is shown by putting "A" one space after the word, and atonicity is shown by putting "B" one space after the word. Examples, in old and new style, are:

khagyí(f)r(yi) : khagyíIrYI A
qaku(u")p(yi)^ : qakuUBYI B

3.1.1 The Major Adjective Shape Types

There are two major adjective shape types, the invariant and the catalectic. They are discussed in that order.

3.1.1.1 Invariant Adjectives

The term "invariant" is meant to suggest that the adjectives do not vary in the shape of their stems, but this is strictly true only for a very few adjectives, and only relatively true for the rest of the invariants, vis-a-vis the catalectics. The stems of the former are subject to shortening when a long-vowel syllable is closed, but no other alternations occur. On the other hand, the catalectic adjectives are subject to more drastic alternations, described below in the appropriate section.

3.1.1.1.1 Regular Type Invariant Adjectives

The regular invariant adjective stems are classed here as either truly invariant or else as relatively invariant, as described above.

3.1.1.1.1.1 Truly Invariant Stems

Truly invariant stems include the following:(34)

thurinna- B 'lonely'
quruusa- B 'annoying'

There can be no vowel shortening or Apocope / Syncope, since those could be precipitated only by the addition of suffixes or enclitics, and then only if an Apocopatable vowel were at the end of the stem. Since that is not the case here, the stems are entirely without alternation in their segmental phonology.(35)

(34) The complete list is: qykkya- B 'short', qapne- B 'dangerous', thurinna- B 'lonely', quruusa- B 'annoying', khytaane- B 'dirty-1', and yanaage- B 'dirty-2' [also yanaa- B, as an adnominal form].

(35) As pointed out in 3.3.1.2, however, suprasegmental, i.e., accentual, alternation is certainly the case in all normal adjectives.

3.1.1.1.1.2 A Preview of the Infinitive in *+ku

In order to deal with the shape of the relatively invariant stems, a short excursus on the infinitive in *+ku and its use with a single following enclitic is necessary.

When the infinitive suffix is added to an adjective stem, and is phrase-final, it has the shape +k##. But when it is followed by the enclitic -n '(Dative)' or -m 'also; even', it has its fuller form +ku, i.e., +ku-n or +ku-m. This is of course the alternation seen in so many nouns, that involving Apocope / Syncope, and I accordingly assume the correctness of the reconstruction *+ku for +k## / +ku-C##. And, to review, -n## / -nyi- is from *-ni, and -m## may either be reconstructed as *-mu or *-mi; there is not enough internal information to decide at this point, though comparison with Japanese -mo will yield *-mu. See also the verb chapter.

3.1.1.1.1.3 One-Syllable Invariant Stems

One-syllable stems are all of the relatively invariant type:(36)

hweE- B 'fast; early'
 hweekha B (finitive form)
 hwek B / hweeku-m A (infinitive)

The form with +kha is syllabified .hwee.kha., and so the long vowel of the stem is preserved.

When the infinitive suffix +kU is added, in its word-final Apocopated form +k##, the vowel of the previous syllable must be shortened if it is long, since x hweek is an unacceptable, double-heavy

(36) The suffixes are discussed in 3.3, as is the accent when the enclitics -m and -nYI are added.

form; but if the enclitic -m 'also; even' is added to the infinitive, then it is in its un-Apocoped form +ku-, and, as seen in the noun section, the result is a syllabification .hwee.ku-m. that does not leave the ..k.. of the infinitive as the final consonant of the preceding syllable, and thus .hwee. is allowed to remain long.

Both type A and type B stems are represented in this group, three of the former and five of the latter, for a total of eight.(37)

3.1.1.1.1.4 Two-Syllable Invariant Stems

Of the dissyllabic relative invariant stems, there are two subtypes, ones with short first syllables and ones with long. Both subtypes have long second syllables, since otherwise they could not be relative invariants. Examples of the type with short first syllable are far more common.(38) Examples of the type with long first syllable are far more rare, and subdivide into those with first-syllable long vowel and those with first-syllable final consonant. The only one with long vowel is

(37) They are myiI- A 'new', qoO- A 'green', thuU- A 'far, distant'; and hweE- B 'fast; early', hwiI- B 'big-1', maA- B 'tasty', siI- B 'sour', and tyuU- B 'strong'.

(38) They are: hyiryaA- A 'low-1, short; flat', khataA- A 'hard-1', kuraA- A 'dark', qahaA- A 'red', qaraA- A 'rough'; gumaA- B 'little-3, small-3' [old-fashioned], hagoO- B 'hateful, ugly', hwkaA- B 'deep', hyiryuU- B 'wide', kharaA- B 'salty', khsaA- B 'smelly', khumaA- B 'modest, shy; detailed, fine', khyuraA- B 'pretty', kuruU- B 'black', kwahaA- B 'hard-2', nagaA- B 'long', nageE- B 'long-lasting; long (in duration)', nyigyaA- B 'bitter', qasaA- B 'shallow', quhuU- B 'large, big-2; plentiful, much/many', qusuU- B 'thin-2', qyibaA- B 'narrow', qyinaA- B 'little-1, small-1', syryuU- B 'white', thahaA- B 'tall, high', thykyaA- B 'near', yiwaA- B 'hungry', wa[k]haA- B 'young', yuthaA- B 'flexible', yuwaA- B 'weak'; and [verb infinitive]~#tyageE- 'be likely to' [an atonicizing suffixal adjective, indicated by preposing "~" to show effaced preceding accent].

yiigo0- B 'itchy'; the only one with syllable-final consonant is
 qyikryaA- B 'few'. They must both be seen as compounds, to fit into the
 Sd canonical-form restrictions:

yii#go0- B
 qyik#ryaA- B

3.1.1.1.1.5 Invariant Stems of More than Two Syllables

The remaining adjective stems of this subclass are khoot(?h)inaA- B
 'noisy', khawayiI- B 'cute-1', and qumiisyryiI- B 'interesting,
 amusing'.

Two of these may be seen as compounds, because of the placement of
 long vowels:

khoo#t(h?)inaA- B (CVV#CVCVV-)
 qumii#syryiI- B (CVCVV#CVCVV-)

I have no notion of the provenance of the former, but it could
 provisionally be reconstructed as *k_o#tuna- B or *k_o#tena- B, depending
 on whether it actually has aspiration in its second syllable. As for
 the latter, it is probably a loan from a mainland dialect that
 monophthongized the final syllable equivalent to NJ predicative or
 adnominal omosiróí, i.e., omosiree. The change of ..mu.. to ..mi.. must
 have occurred later, in Shodon itself, (39) similar to the free variation
 in Shuri qwiiruki- B / qwiiriki- B 'interesting, amusing'. There, the
 etymology is transparently *o+tiro#ke- B, related to NJ iroké 'coloring;
 amorousness; ambition, interest'. The back vowel *..ro.. or *..ru.. was

(39) Shuri has the related qumusyirusan B, with qumu-, described as a
 somewhat literary word. Interestingly Sr has qumusyirii as an
 attributive form. It is not likely that Sd qumii- preserves an
 older state of affairs, but it is not beyond doubt.

changed to the front vowel *.re.. or *.ri.., respectively--depending on whether the fronting happened before or after raising--by the influence of the front vowel(s). Similarly the ..mi.. in the Shodon form could also have been changed from a back vowel to a front one by the following front vowel *.syi... The word obeyed the regular vowel lengthening rules, either by being borrowed early enough to go through the historical changes, or by analogy after entering the dialect. And similarly, it may have been borrowed early enough to undergo the vowel raising sound change, or it may have been archaized much more recently once borrowed.

The third item, khawayiI- B 'cute-1', is easily identified as a borrowing. Its structure is wrong, since the vowel length falls on the third syllable, with no previous vowel length in the word.(40) In addition, compare the NJ adjective kawafi 'cute', from earlier kaFayu-ki. Note the exact fit of meaning and the close fit of pronunciation. Finally there is a second word meaning 'cute' in Shodon, a catalectic, khanaasyI- B 'cute-2'. The formal equivalent of this word in NJ, kanasii^,(41) means 'sad', and the poorer semantic fit relative to khawayiI- B shows that the Shodon word khanaasyI- B is older. (An earlier meaning of the NJ word is 'lovable, cute', similar to the Sd meaning.)

(40) This piece of evidence is not in itself overwhelming, since the word can be analyzed as kha+wayiI- B, with a prefix. Such an analysis is also necessary to explain hyi+gurUU- B 'cold', a catalectic for which there is no good borrowing source outside of the Ryukyus.

(41) A double accent on an NJ form means that there is free variation between the two cited accents.

3.1.1.2.1.2 Quasi-Catalectics

There are three quasi-catalectic adjective stems, all of the two-syllable type:

hurUU- B 'old (not new)'
 hurka B (finitive)
 huruUkU B (infinitive)
 huruu#syimotI B 'old book' (..-SJ)
 (but cf. hurtya B 'stale tea', hurwataA B 'old cotton wadding',
 hur(#)honU B // huruu(#)honU B 'secondhand books')

kharUU- B 'light(weight)'
 kharka B (finitive)
 kharuUkU B (infinitive)
 kharuu#qyisyI B 'light stone'

warUU- B 'bad'
 warka B (finitive)
 waruUkU B (infinitive)
 waruu#munU B 'bad one'
 (but also war(#)munU B '[id.]')

The difference between catalectics and quasi-catalectics is that the former have adnominal forms with consonants (i.e., in the Apocopated form) in stem-final position (example: khipØ#hyiyaA B 'smoky room'), while the latter have long vowels, in this case mimicking the relative invariants. All three quasi-catalectics are accentually B type, and all have r-initial final syllables in their stems, but there are also r-initial final-syllable stems among the catalectic adjectives.

3.1.1.2.2 Later-Syllable-Type Catalectics

I have given this type this name because the alternation (C)V / (C)Ø (with no (C)VV alternant) that characterizes it is found almost exclusively in third or later syllables.(43) There are thirteen stems in

(43) There is but one exception, hwaasyI- B 'funny', which because of the heavy first syllable may not lengthen the vowel of its second syllable, and therefore automatically is forced into the class.

this subclass, two of them suffixal. Of the remainder, one is a two-syllable stem, five are three-syllable stems, and five are four-syllable stems. All but one have the alternation *..syik## / ..syku-m## / ..sykya##*:(44)

Two-syllable stem:
hwaasyI- B 'funny'

Three-syllable stem:(45)
hoorasyI- B 'happy'
khanaasyI- B 'cute-2'
mutkasyI- B 'difficult'
qiyaaasyI- B 'vile'
yasaasyI- B 'easy'

Four-syllable stem:(46)
khindurosyI- B 'terrible'
qatharasyI- B 'precious'
quthunasyI- B 'gentle'
qyityoonasyI- B 'busy'
mii#hykyaarU- B 'dazzling'

-
- (44) The first-syllable length of the two-syllable stem *hwaasyI-* B and of the three-syllable stem *hoorasyI-* B is treated below in the historical section.
- (45) The form *qiyaaasyI-* B should have Contracted, and may be a loan, but perhaps is also indicative of the failure of Contraction with original **VVyV* sequences, if the discussion of Length Shift below is correct; it assumes the order (1) Contraction (**iiyasi-* B), unchanged, not *x qyaasi-* B), (2) Length Shift (> **iyaasi-* B).
- (46) The two forms *qatharasyI-* B and *quthunasyI-* B have irregularly short second syllables; the former cannot be a recent loan, because NJ *atarasí* means only 'new', and the accent is reversed; and the latter also has the reverse accent of NJ *otonasí* '[id.]'. Their short second syllables thus remain unexplained.
 For *qyityoonasyI-* B, the only explanation for *..tyoo..* available to internal reconstruction is Contraction (< **i/etiy/wɔnasi-* B), because Progressive Palatalization should have left *x ..thyoo..* (< *x *itɔnasi-* B). But J has only the pre-modern *ito+na-* 'busy, lack of time' [KJE 139B], suggesting either that Martin did not note the aspiration, or that it has been irregularly suppressed. Martin (p.c) also harbors doubts about this form.
 The alternation of *mii#hykyaarU-* B is somewhat different from the others, as shown below.

Suffixed stems:(47)

Two syllables:

[noun]+rosyI- '(appropriately) [noun]ish'

yinga+rosyam B 'is manly'

wunak+rosyam B 'is womanly'

Three syllables:

[verb infinitive]+gurusyI- 'difficult to [do]'

One of the results of these alternations is that there appear to be superheavy syllables in several of the forms:

With .CVVC. Syllables		With .CVV. Syllables	
khanaasykya B	khanaasyku-m B	!	khanaasyik B
qyiyaasykya B	qyiyaasyku-m B	!	qyiyaasyik B
yasaasykya B	yasaasyku-m B	!	yasaasyik B
hwaasykya B	hwaasyku-m B	!	hwaasyik B
+-----+			
mii#hykyaarka B	!	mii#hykyaaruku-m B	mii#hykyaaruk B
+-----+			
Without Stem-	!	With Stem-	
Final Vowel	!	Final Vowel	
+-----+			

A historical discussion follows below in 3.1.2.1.2.

3.1.2 Historical Changes in Adjective Stems

3.1.2.1 Provenance of the Catalectic Adjectives

3.1.2.1.1 The Second-Syllable Type

We noted in the preceding chapter that nouns of the etymological type *CVCICE are all of the type CVCCV in modern Shodon dialect, and that nouns of the etymological type *CVCICI come out as CVCV(V)C(V). The second-syllable-type catalectics, i.e., CVC(V(V))- , are equivalent to only one or the other of these etymologically trisyllabic noun forms,

(47) Whether the two suffixes +rosyI- and +gurusyI- are atonicizing is not possible to know from the data available, since the only two examples are in any case both with nouns that are accented B when independent.

depending on the particular derivation, either with +kU, or with *+sa or *+ka. The forms derived with +kU (< *+ku) are equivalent to the *CVCICI type, because all catalectic stems end in etymological high vowels, and *+ku has a high vowel in it: *CVCI+ku(..). But where a derivational suffix beginning with a syllable with an etymological non-high vowel, i.e., *+CE(..) has been added, the resulting form has the shape *CVCI+CE.., and that is like the modern CVCCV nouns. This discussion may be summarized, with examples, as follows:

		*CVCICI-CI	*CVCICI	*CVCICE	Gloss
Nouns	A	khagyiiryi-m	khagyir /	--	'limit / --'
	B	qakuubyi-m	qakup /	qapra	'yawn / oil'
Adjectives	A	qubuuku-m	qubuk	qupka	'heavy'
	B	hyikuuku-m (A)	hyikuk	hyikka	'low'

Just as with the nouns, then, sequences of high vowel plus high vowel resulted in a preserved first high vowel and an Apocopated/Syncopated second high vowel:

*..CICI.. > *..CIC..

Thus the richness of adjectival derivation created members of the equivalent of two separate trisyllabic noun classes, and the result was the dissyllabic-stem catalectics.

3.1.2.1.2 The Later-Syllable Type

We have seen that catalectics are like *CVCICE (> CVCCV) and also like *CVCICI (> CVCV(V)C(V)). Accordingly, we expect every high-vowel-final stem to behave the same way. Cf. darUU- B 'weary' (with length alternation because of second syllable), hyi+gurUU- B 'cold' (with length alternation in second syllable of lexical morpheme), and mii#hykyaarU- B (with no length alternation because it occurs in the

third syllable of the lexical morpheme). These are all expected, save for the long vowel kyaa of *mii#hykyaarka* B, to which I will return shortly. The seeming exceptions are the later-syllable-type catalectics ending in *..syI*. Here, instead of *..sykya / ..syiku-m / ..syik*, we get *..sykya / ..syØku-m / ..syik*. The second form needs to be accounted for before we return to the question of the superheavy syllables. The sequence *syC* turns up in two entirely distinct phonological environments: (1) non-word-initially, as in this case, and (2) word-initially. The latter is treated as Devoicing, on a par with the same phenomenon between voiceless stops in word-initial position that results in secondary Aspiration. The former is normally treated as Apocope / Syncope, on a par with the same phenomenon with other **CI* sequences in the appropriate environments. It leaves no secondary aspiration in the case of stops. But note that with **si*, since aspiration is impossible, there is no way to distinguish, in any single case, between a *syC* sequence due to Devoicing or due to Apocope / Syncope.

Armed with this knowledge, let us reconsider *..sykya*, *..syku-m*, and *..syik*. The rules of internal reconstruction so far adduced for *Sd* require:

<i>..syi+k</i>	<	<i>*..si+ku</i>
<i>..sy+kya</i>	<	<i>*..si+ka</i>
<i>..sy+ku-m</i>	<(Ap/Sync)<	<i>*..si+ko-mu/i</i>
x <i>..syi+ku-m</i>	<(exception to Ap/Sync)<	<i>*..si+ku-mu/i</i>

The first two forms are just what is expected. For the first, when **+ku* Apocopates, it closes the preceding syllable, keeping **si* from in turn becoming input into the Apocope / Syncope sound change. In the second

case *si Syncopates normally, being in an open syllable. The last two forms are, respectively, what actually appears, and what we would expect from forms such as mii/#hykyaaru+ku-m. The former requires setting up *..si+ko-m, a form that in turn requires setting up a *+ku / *+ko alternation for an earlier period of Sd dialect history, presumably preceded by either a Lowering or Raising sound change in order to have uniform pre-Sd *+ku or *+ko. The latter form requires that *si not undergo Apocope / Syncope.

There is, however, one more possibility deliberately overlooked so far, in which *si that has not for some reason already been Apocopated / Syncopated becomes input to the Devoicing sound change, if it is in the appropriate environment. That is what happens here. The sequence *..Vsi+ku-mu/i (*..VCI+CI-CI) requires that Apocope / Syncope not apply, so *si remains, un-Syncopated. This in turn feeds into Devoicing, which requires a voiceless consonant on either side of the high vowel (or the sequence *sir or *sur). The result is Devoicing, the results of which, however, are phonetically no different from the results of Apocope / Syncope, for the sequences sC and syC. The reason this has not been seen elsewhere is that a phonological word at least five etymological syllables long is needed as input, since the vowel in question cannot be Lengthenable, and as such it must be at least the third syllable of the stem, followed by *+ku-mu/i. If it is Lengthened, it cannot be input to the Devoicing sound change (cf. husyII- B 'wants N'). Thus either Apocope / Syncope or Lengthening deprives us of any examples of this sort except for this paradigm, which produces long words in quantity,

with the appropriate environments. Note that this paradigm also provides evidence for the ordering of the following sound changes:

- (1) Apocope / Syncope
- (2) Devoicing

There is no evidence for the sequence of Lengthening-2 in relation to Devoicing, because the only example of a Lengthened word that would otherwise have been a part of this pattern, husyII- B 'wants N', has a vowel Lengthened by Lengthening-1, which we already know to be ordered before Apocope / Syncope.

(Parenthetically, note that there is an exception to Devoicing: no form such as ##CC## (i.e., a free form with no voiced vowel) is allowed. This result is achieved by Devoicing being inapplicable to the *CVC output of the Apocope / Syncope sound change, and therefore constitutes more evidence for the given order of the Apocope / Syncope and Devoicing sound changes.)

Now it is possible to go back and investigate the reason for the superheavy syllables. The first point to note is that in fact the "superheavy" syllables of forms with ..sykum are not really superheavy at all, at least not in their origin. They were shown above to be, in actuality, cases where the sequence syC is syiC with the vowel Devoiced. Thus khanaasykum B is (at least in origin) .kha.naa.sy.kum., not .kha.naasy.kum.. But this explanation will not do for the cases with the sequence ..sykya. Here analogy has come in, with earlier *.kha.nasy.kya. replaced by modern .kha.naasy.kya.. We know that the reanalysis has not been to x .kha.naa.sy.kya. because of the form mii#hykyaarka B, which can only be analyzed as .mii.hy.kyaar.ka., not

3.1.1.1.2 Ambivalent Adjectives

There are two ambivalent adjectives. They behave either as relative invariants or as -syI-type catalectics (depending on the the following suffix), which are discussed below in 3.1.1.2.2. The forms are:

khabaA- B / khabaasyI- B 'fragrant'

invariant:

khabaAkU B (infinitive)

khabaa#thyaA B 'fragrant tea' (adnominal form)

-syI-type catalectic:

khabaasykya B (finitive)

khabaasyam B (verbalization)

sidaA- B / sidaasyI- B 'cool'

invariant:

sidaAkU B (infinitive)

-syI-type catalectic:

sidaasykya B (finitive)

sidaasyam B (verbalization)

A historical discussion follows in 3.1.2.2.3.

3.1.1.2 Catalectic Adjectives

Catalectic adjective stems, in some of their forms, lack a final vowel, although one subclass of them also exhibits a long-vowel / short-vowel alternation. There are no single-syllable catalectics (in their underlying forms), only stems of two or more syllables. All catalectics exhibit at least the stem-final alternation (C)V / (C)∅, and this is their defining feature.

3.1.1.2.1 Second-Syllable-Type Catalectics

The second-syllable-type catalectics have a three-way alternation VV / V / ∅, depending on the environment. All but one are dissyllabic in their non-Syncopated form; the one exception is hyi+gurUU- B 'cold',

which has a prefix, and the second syllable of the lexical root of which behaves just like the second syllables of the other second-syllable-type catalectics.

3.1.1.2.1.1 Regular Second-Syllable-Type Catalectics

The regular second-syllable catalectic has forms such as the following:

khiBUU- B 'smoky':
 khibuku-m B 'even smoky' : khibuk B 'smoky' :
 khipka B 'smoky' (finitive)
 quBUU- A 'heavy':
 qubuku-m A : qubuk A : qupka A

husyII- B 'desired':
 husyiku-m B : husyik B : husyka B
 hyisII- B 'thin-1':
 hyisiku-m B : hyisik B : hyiska B

The vowels involved in the alternations are all high. The stems uniformly end in a consonant save for cases where +kU is added. There and only there, the stems act as if they were relative invariants, with a long-vowel / short-vowel alternation. Both type A and type B accent are represented in this subclass.(42)

(42) The members of this subclass, subdivided into type A and type B accent classes, are: quBUU- A 'heavy', syiBUU- A 'puckery', astringent; sour-faced', marUU- A 'round', khytiI- / kyit- A 'overdone; too strong; strained, tired' [Martin 1970:136B has this as khyit- A / khytiI- A, but SdElex 32 has it as kyit- A / khytiI- A, the form expected if no analogical insertion occurs in the kyit- A alternant; Martin (p.c.) concurs with this choice, qatyII(?) - A 'thick'; khiBUU- B 'smoky', nyiBUU- B 'blunt', hyikUU- B 'low-2', nukUU- B 'warm', qyinUU- B 'little-2, small-2', darUU- B 'weary', nurUU- B 'lukewarm', yurUU- B 'loose', hyi+gurUU- B 'cold', hyisII- B 'thin-1', qusII- B 'thin-3', yasII- B 'easy; cheap', qatII- B 'hot', husyII- B 'desired'; and [verb infinitive]~#busyII- 'wanting to [do]' [an atonicizing suffixal adjective, indicated by preposing "~" to show effaced preceding accent].

.mii.hy.kyaa.r.ka.--nowhere else in the Sd data is there any evidence for the phoneme r being able to stand as its own syllable, since vowels following it do not Devoice.

Since we see that there has been a reanalysis of *.CVsy.kya. to .CVVsy.kya., it would not be too surprising if psycholinguistic experiments were to show that ..CVVsyku.. is analyzed as .CVVsy.ku., since there does not appear to be any phonetic difference between syllable-final sy and voiceless-vowel sy, and since superheavy syllables occur in the same position elsewhere in this paradigm, namely in the .CVVsy.kya. forms. Such a treatment would completely unify the treatment of syllables ending in sy before +ku and +kya, but would also result in having to treat the vowel of ..ru.. of mii#hykyaarutku-m B as being part of a relic form, missed by the reanalysis because it is the only stem of the later-syllable catalectics that does not end in ..syI. Just how far the reanalysis has progressed, however, is speculative.

3.1.2.1.3 Quasi-Catalectics

The quasi-catalectics behave just like the second-syllable-type catalectics, except that they have a long vowel in adjective-noun (i.e., attributive) compounds where those of the second-syllable type have no vowel:

Second-Syllable-Type Catalectic Stem Plus Noun:

khip#hyiyaa B 'smoky room' (khiBUU- B)
 khyit#tyaa A 'strong tea' (khyItII- A)
 yas#munU B 'cheap thing' (yasII- B)

Quasi-Catalectic Stem Plus Noun:

kharuu#qyisyI B 'lightweight stone' (kharUU- B)
 huruu#syimotI B 'old book' (hurUU- B)
 (but cf. hur(#)honU B // huruu(#)honU B 'secondhand books')
 waruu#munU B 'bad one' (warUU- B)
 (but cf. also war(#)munU B '[id.]')

There are only three quasi-catalectics, while there are many catalectics. Note that, while the second-syllable-type catalectic category is composed of members of both the tonic (A) and atonic (B) classes, the quasi-catalectic category is composed only of atonics (B). While this may be entirely accidental, it may also be indicative of a period when atonic-stem length was not predictable but rather fell unpredictably on either the first or second syllable of a word. In that case, these quasi-catalectics would have noun compounds that showed their original second-syllable length:

kharuu#qyisyI B < *karuu#isi B
 huruu#syimotI B < *fo/uruu#simotU B
 (..#syimotI actually <- NJ syómotu)
 waruu#munU B < *waruu#mo/unu B

and the other atonics (B) would be divided into those stems that had original first-syllable length and those that had switched to that category by analogy:(48)

khip#hyiyaA B ?< *keebu#fe/iya B
 (?< *kébu-.. (= A); cf. *kebúsi (= A) 'smoke')
 yas#munU B ?< *yaasu#mo/unu B

If there were two places where length could fall in atonics, then it would not be possible to predict length by sound change, and pre-Sd would necessarily have to incorporate the length distinctions, leaving

- (48) The second member of the first example below may be reconstructed *fiiya assuming that length in the first syllable blocks contraction to x hyaA X; it is also reconstructible as either *fyeya X or *fyeyya X, since neither of these forms undergoes contraction. The pre-form *fiya X would have undergone contraction, and is thus not a possible reconstruction. It is also possible that the word ..#hyiyaA~ is a borrowing from Japanese, and in that case no reconstruction to pre-Shodon is possible; but then it is likely that the word entered the dialect before Raising, because of the e of NJ heyá and the (y)i of the Shodon form.

the putative sound change Lengthening-1 as a phantom.

If Lengthening-1 is indeed not possible to set up as a real sound change, then there are certain repercussions. Since vowel length cannot be predicted at the earliest level, it is no longer necessary to have tonicity be a separate phonemic category--it will simply be replaced by the notion that the present-day tonics are the pre-Sd words that lack any long vowel. If there is a long vowel anywhere in the word, it must be treated as later type B; and if there is no long vowel in the word, then it must be treated as later type A.

The shift of length to another syllable in *CVCIICE would still be required, however, but with the understanding that there was also an atonic of the type *CVVCICE. The shift can then be seen either as real, or as merely an analogical change to accord with *CVVCICE:

*CVVCICE > *CVVCICE > ... > CVCCE
 *CVCIICE ->/> *CVVCICE > ... > CVCCE

or:

*CVVCICE > *CVVCCE > *CVCCE > CVCCV
 *CVCIICE > *CVCIICE > *CVCIICE -> CVCCV

The same line of argumentation may be helpful in explaining irregularities such as qyinuu#dyinYI B // qyinuu#dyinU B 'killing dogs' (cf. qyinU B, and note that qyinU B and qyinuu#.. B are equivalent in form to a catalectic adjective: qyinUU- B), although this might be better explained as a case of a series of high vowels without intervening compound boundary, just as in the case of qakuUBYI B 'yawn' (e.g., qakuubyi-m B 'even a yawn' : qyinuudyin B 'killing dogs').

The discussion of the origin of the quasi-catalectic category must remain at the level of speculation in terms of the evidence available from within Shodon dialect itself.

3.1.2.2 Development of Invariant Adjectives

3.1.2.2.1 Regular Type

The types and their etymologies are:

One-Syllable Stems: *CV- A/B:
 hweE- B 'fast; early' (< *fɛ- B, or with a diphthong)
 hweekha B
 hweEkU B: hwek B / hweeku-m B

If *fɛ- B originally had a diphthong (as does NJ háya- '[id.]'), then that fact is evidence against original long vowels, unless the sequences *..VGVV.. and *..VGV.. were originally monophthongizable, e.g., *fayaa- or *faaya- > *fɛɛ- B.

Two-Syllable Stems: *CVCE- A/B:
 kuraA- A 'dark' (< *kura- A)
 kuraakha A
 kuraAkU A: kurak A / kuraaku-m A

Stems of More than Two Syllables:
 *CE#CVCE-:
 khoot(?h)inaA- B 'noisy' (< *kɔ#te/una- B)
 khoot(?h)inaakha B
 khoot(?h)inaAkU B: khoot(?h)inak B / khoot(?h)inaaku-m B
 *CVCE#CVCE-:
 qumiisyryiI- B 'interesting, amusing' (< *o/ume#sire- B)
 qumiisyryiikha B
 qumiisyryiIkU B: qumiisyryik B / qumiisyryiiku-m B

The *kɔ of *kɔ#te/una- B may also be from an originally monophthongized root; cf. khoO A / ..gaawa~, discussed in the previous chapter, and the discussion immediately above on *fɛ- B.

Others:

*CV#CE-:

yiigoo- B 'itchy' (< *ye#gɔ- B)

yiigookha B

yiigoOkU B: yiigok B / yiigooku-m B

*CVCI#CE-:

qyikryaA- B 'few' (< *i/eki#ra- B)

qyikryaakha B

qyikryaAkU B: qyikryak B / qyikryaaku-m B

3.1.2.2.2 The Truly Invariant Type

The complete list of these and their internal reconstructions is:

- (1) qyikkyā- B 'short' < *ikika- B
- (2) qapne- B 'dangerous' < *abunɛ- B
- (3) thurinna- B 'lonely' < *torenuna- B
- (4) quruusa- B 'annoying' < *o/urosa- B
- (5) khytaane- B 'dirty-1' < *kitanɛ- B
- (6) yanaage- B 'dirty-2' < *yanagɛ- B
 yanaa-N B < *yana-N B
 (N = noun)

Some of these undoubtedly have a different origin. The first, qyikkyā- B, is probably to be reconstructed as pre-Sd *erika- B (for *e see below) on comparison with Sr qinNya- B 'short', with the understanding that this pair of words is related through the sporadic replacement of n by r, a widely noted occurrence in Ryukyuan:(49)

- (49) Whether or not the change *..rk.. > ..kk.. is sporadic or regular is not clear. On the one hand, there is a word harkuna B 'foot race', with no known boundary between *r and *k; on the other hand, there are the pairs qar B 'he, him; she, her' : qattaa B 'they, them', qur B 'he, him; she, her' : quttaa B 'they, them', and khur B 'he, him; she, her' : khuttaa B 'they, them', with a correspondence r : t, which suggests that there has been this sound change:

*r > [-syll, -voi, alpha place] / ___+[-syll, -voi, alpha place]
 That is, *r assimilates wholly to the following voiceless obstruent, if a + boundary intervenes. We also know that there is or has been a derivational boundary between *eri- and the derivational suffix *+ka. Thus it does indeed appear that the change was allowed when some sort of boundary intervened. It seems as if that boundary cannot have been #, because the sound change then would have a class of exceptions, such as hurtya B 'stale

Sr: qiNcya- B < *enika- B
 Sd: qyikkya- B < *erika- B < *enika- B

And note the semantically and formally similar qyinaA- B 'little-1, small-1' (< *ena- B [not x *i, because it has not Palatalized the following syllable]) and qyinUU- B 'little-2, small-2' (< *enu- B). The final syllable *ka is probably the common adjective derivational suffix *+ka seen in many NJ words, such as komakái 'small; detailed' (cf. NJ dialectal variant komáØi '[id.]').

The second word qapne B is likely to be a borrowing from a precursor of modern Kagoshima aqne '[id.]' (Shimato 8, variant aqnaka), because it has ..ne for Japanese ..na+i:(50) NJ abuna+i^, and Shuri has qabunasyan A (New/Literary) '[id.]'.(51) The older Sr word is qukaasyan B (101A, 548B).

tea', where the ..rt.. sequence must once have had a word boundary in between the two letters. This problem can be dealt with by claiming that hurtya was compounded after the sound change assimilating *r to the following voiceless obstruent. The lack of assimilation would then be used as a way of separating out those words that were compounded after the change from those compounded before. Allowing the change to encompass both + and # also takes care of qakkyum B 'walks', where there is no alternation of the first k with any r in Sd, but where the equivalent in Japanese is either OJ ariku or OJ/NJ aruku, with equivalent r. It may be that Japanese ariku // aruku is a compound verb, because it has a strange accent in the Ruiju Myôgi Shô (Martin ms., 1980), and if so, then there may have been a boundary in the word to effect the observed change. At any rate, there is only fragmentary evidence bearing on this problem, especially within Shodon dialect, so I leave it unresolved.

- (50) Kagoshima dialect has adjectives with both ..e (< *..a+i or *..o+i) or ..i (< *..u+i) and ..ka (a conjugational suffix, different from the derivational *+ka above).
- (51) But it has qabunee tukuru 'dangerous place' (OGJ 101A), with unstated accent).

The third item is related to Japanese *turenái* 'heartless, unfeeling, cold', and is likely to be a borrowing from Kagoshima *turennaka* 'heartless, inhuman' (KHS 121), but has to have been borrowed early enough for the semantic divergence.

Item 5, *khytaane-* B, has to be a loan because it has not undergone Progressive Palatalization, despite initial *khy..* < **ki*. However, it does not appear to be a borrowing from Kagoshima, since the Kg form is *kissanaka* // *kissane* (KHS 69), with *..ss..* where Sd has *..t...* It is of course possible that a sound change within Kg itself has made **t* into *ss* in some particular environment after the Sd borrowing occurred.

The last item may be original, with the suffix **tg̃* probably being original in any case; or the stem may be from NJ *iyá na* 'disagreeable; loath to', but borrowed early enough to have gotten a reversed accent and somewhat different meaning.

3.1.2.2.3 The Ambivalent Stems

There are two ambivalent adjectives, and they are classed as such only in that some of their forms are missing the derivational suffix *+syI*.

khabaA[+sy]- B 'fragrant' < **kaba[+si]-* B
khabaasykya B < **kaba+si+ka* B
khabaasyam B < **kaba+si+sa#a+mu/i* B 'is fragrant'
 (See 3.3.3 for a discussion of the conjugation type.)
khabak B / *khabaaku(-m)* B < **kaba+ku* B
khabaa#N B 'fragrant N' < **kaba#N* B
khabaa#thyaA B 'fragrant tea'

sidaA[+sy]- B 'cool' < **su/eda[+si]-* B
sidaasykya B < **su/eda+si+ka* B
sidaasyam B < **su/eda+si+sa#a+mu/i* B
sidak B / *sidaaku(-m)* B < **su/eda+ku* B

This completes the treatment of adjective stems.

3.2 ADJECTIVE DERIVATIONAL MORPHOLOGY

3.2.1 Adjectives Derived with *+si

It was noted above that the ambivalent stems are evidence for the existence of a derivational suffix *+si. For the later-syllable catalectic stems described above, it is not clear for any single case whether ..syI- is part of the stem or of the derivational morpheme, since there is no interaction between that morpheme and any sound changes that would allow a reconstruction to be made one way or the other.

For the sake of completeness I add here a short treatment of the catalectic adjectives husyII- B 'wants (N)' and ..~#busyII- B 'wants to (V)', considering also whether they have the derivational suffix +syI in them. These adjectives are obviously related, with the second one unpredictably voiced, (52) and their meanings are identical; they differ only syntactically. The form husyII- B takes only noun arguments, while ..~#busyII- B takes a verbal one.

Both forms are second-syllable-type catalectics, and so are reconstructible as *fosi- B and *..~#bosi- B, with both in turn going back to *fosi- B.

The form *fosi- B does not have the derivational suffix *+si in it, since it would be x huut+sy.., with long first syllable, if it did. Compare myii+ku-m A 'newly', for example, where the derivational

(52) That is, there is no way to predict, for any particular use of a morpheme, whether it will begin as a second member of a compound with a voiced consonant if it occurs as a free form with a voiceless consonant; but in this use, the morpheme always begins voiced.

morpheme #kU attaches to a Lengthened monosyllabic stem. It only remains to say that the height of the vowel of the first syllable can be reconstructed, because it did not Devoice where Devoicing of an etymologically high vowel between *f and *s in initial position is predicted:

*##fos.. > ##hus.. (// ##hws..)
 *##fus.. > ##hws..

3.2.2 The Adnominal: Attributive Compounds with Nouns

As pointed out and exemplified above, adjective stems may compound directly with nouns, as modifier-plus-modified constructions. At this point it is unnecessary to discuss shape types, since these have already been gone over in some detail. There remain only two matters to discuss: (1) there are some adjective stems that appear only in these compounds, and, (2) the voicing of the initial voiceable consonant of the second member cannot be predicted.

3.2.2.1 The Wholly Adnominal Stems

The wholly adnominal stems are:

yinu#N B 'the same N'
 qúnadyi#N // qúnasyi#N 'the same N'

Since Martin does not give actual adjective-stem-plus-noun examples here, only a little can be made of the forms he gives. First, there are no vowel alternations whatsoever. For yinu#.. B, we would have expected either yinuU#.. B or yinUU#.. B. For the case of the freely-varying qúnadyi#N // qúnasyi#N, we would have expected a long vowel in the

second syllable. In addition, accent is irregularly placed on the first syllable despite the open etymological second syllable, a phenomenon otherwise seen only in a few verbs (discussed in the next chapter), and, unlike the case of the verbs, having no analogically-motivated explanation. I henceforth term this rare subtype of tonic (= type A) accent "A'." Since both words have the same meaning, and since the former appears to have no formal equivalent in Japanese, while the latter pair of free alternants does (NJ *onazi*[^] / *onazi* / *onáziku* // *onnazi*[^] // *onnasi*[^]), right down to the voicing alternation, it would seem that *qunadyi*#N A' // *qunasyi*#N A' are recent borrowings from Japanese, while *yinu*#N B, in whatever appropriate set of alternants, is original (**yeno*/u B).

3.2.2.2 Voiced-Initial Alternants in Compounds

3.2.2.2.1 Provenance of hw, hwy, hy, and h in Initial Position

The unpredictable voicing of the second member of an adjective-noun compound is interesting partly in its showing that the resulting expression is indeed a noun compound, and partly in providing evidence for former stages of the phonology.(53) The alternations are:

Labials:

hw	/ b	<u>hwi</u> I B 'flatus' : khsaa# <u>bi</u> I B 'smelly flatus'
hwy	/ by	<u>hwyi</u> I B 'vulva' : khsaa# <u>byi</u> I B 'smelly vulva'
hy	/ by	khíp# <u>hyi</u> yaA B 'smoky room' : nuk# <u>byi</u> yaA B 'warm room'
h	/ b	<u>hanu</u> UsI B 'yam' : quhuu# <u>banu</u> UsI B 'large yam'
		<u>huni</u> I B 'boat' : hwee# <u>buni</u> I B 'fast boat'

(53) The same sort of evidence is provided by husyII- B 'wants N' and ~#busyII- B 'wants to V', discussed above.

Velars:

kh / g	<u>kh</u> oO A 'river' : hwkaa# <u>g</u> oO B 'a deep river'
	<u>kh</u> amaAtyI B 'head' : nyibu ?u <u>g</u> amatyI B 'a dull head'
k / g	<u>k</u> unyil B 'country' : thuu# <u>g</u> unyil A 'a far country'
ky / gy	<u>ky</u> inU B 'garment' : syryuu(#) <u>g</u> yinU B 'white garment'

Coronal:

s / d	<u>s</u> eheE A 'wine' : kharaa# <u>d</u> eheE B 'salty wine']sic
-------	--

Note that all b alternates with some kind of h. The natural conclusion is that h, at least in initial position, comes from a sound that was once labial, since, for the other two alternations, the alternating sounds are articulated homorganically. The sound s alternates with d, establishing a fricative : stop correspondence as well as one of voiced : voiceless. Since both hw and hwy and hy on the one hand, and s on the other are fricatives, I assume that h is from *f, presumably a voiceless bilabial fricative, just as modern Sd has that sound for hw. Furthermore the word hwyil B 'vulva' is the only word in Shodon that has the combination hwy; all other cases are hw, hy, or h. Since it is a taboo word, I assume it is probably a relic from a period when the same pronunciation as NSd hwyi was *fyi, yielding the present special combination hwyi, where hw has to be seen as equivalent to *f. This assumption rids us of one member of the three-way opposition hwy : hw : hy, and allows a statement about the distribution of h or h-plus-glide in initial position that unifies all of them into a set of allophones of a former phoneme *f. The distribution of the word-initial allophones is as follows:

[c, /	___]i	(i.e., hyi),
	___C	(i.e., hyC);
[∅] /	___[I]	(i.e., hwi),
	___[E]	(i.e., hwe),
	___[aa]	(i.e., hwaa),
	___C	(i.e., hwC)
[h] /	___[u]	(i.e., hu; but also [hu] in free variation)
	___[o]	(i.e., ho)
	___[a]	(i.e., (short) ha)

The set of sound changes is as in Table 5 below.

Table 5

Sound Changes of *f to *h(w(y))

f > h	V > (V)	Raising	f > h	
*fyi > hyi	> hy	> hy	> hy	(hykyaaRyum B 'flashes' < *fikar.. B)
	> hyi	> hyi	> hyi	(hyiryaaRyum A 'picks up' < *firar.. A; hyiI A 'day' < *fi A or *fye A)
*fye > *hye	> *hye	> hyi	> hyi	(hyidaA A 'lap' < *fyeda A; hyikuuku-m B 'low-2, too' < *fyekuku.. B)
*fe > *fe	> *fe	> hwi	> hwi	(hwirYI A 'garlic' < *feri A)
*fɛ > *fɛ	> *fɛ	> hwe	> hwe	(hweE A 'ashes' < *fɛ A)
*fu > *fu	> *fw	> hw	> hw	(hwkaA B 'other' < *fuka B)
	> *fu	> *hwu	> hu	(?hukreyum A 'it swells' < *fu/oku/orɛ.. A)
*fo > *fo	> *fo	> *hwu	> hu	(husuU A 'navel' < *foso A)
*fɔ > *hɔ	> *hɔ	> ho	> ho	(hoorasykya B 'happy' < *fɔ(?C)ɔrasi- B)
*fa > ha	> ha	> ha	> ha	(hanaaasum B 'speaks' < *fanass.. B)
	> *fa	> *fa	> hwa	(hwaA A 'leaf' < *fa A; hwaasyI- B 'funny' < *fa(?C)asi- B)

I have put the first change of *f to h as early as possible. The change is not likely to have occurred after Apocope / Syncope and Raising, (54) because after that both hak A 'box' < *faku A and hwa-m A 'leaf, too' < *faa-mu A have the same CVC shape, whereas before Apocope / Syncope and Raising their shapes are different, and so allow us to account for the difference between h and hw in modern Shodon dialect. The delabialization occurred in front of palatal vowels and low back vowels, except for long *aa (modern Shodon hwaA A 'leaf', hwaA B 'tooth', hwaasyI- B 'funny'). The forms hykyaaRyum B and hyiryaaRyum A have to have had *fi in their initial syllable, because Progressive Palatalization has occurred, and in the former case Devoicing has also occurred. No Progressive Palatalization has occurred with hyidaA A, making it either with *fye or a borrowing. The hyi of hyikuuku-m B neither Palatalizes the following syllable, nor does it Devoice, so it also must be from *fye. The etymology for 'garlic' is somewhat different than what one would expect from NJ híru 'garlic; wild rocambole'. So is *fɛ for 'ashes', where NJ has hai < OJ fafyi. Internal reconstruction has given some evidence of monophthongization, but usually fails to give any concrete choice between possible pre-forms. (55) The form hwkaa B is also a surprise when compared to NJ

(54) Nor is it likely to have occurred after Shortening, else words like qoohwa B 'green leaves' would be unexplainable.

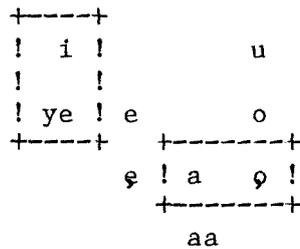
(55) The comparison with Japanese does elucidate a couple of problems. First it shows that the Monophthongization took place before Apocope / Syncope, since it takes away input from the latter sound change. In addition, we can guess that no *ɛ will be left once other processes have accounted for it, and that "*ɛ" is really a symbol standing for other sequences and their attendant sound changes. In that case the details of the sound changes for *ɛ may

hoka. The NJ form is reconstructible as *foka, with *o, and this is different from the Sd *u. The verb hukreyum A is included to point out the fact that, because *u will not Devoice in a closed syllable, any form with a huCC sequence may have come from *fo. The adjective hoorasykya B has length in its first syllable, without Cw or Cy, so it is possible to guess that the sequence may once have been *..pCp.., with a consonant that has since disappeared. If one does not know anything about mainland Japanese, then it may be that one will guess that the mystery consonant was *f, since ..hw.. sequences are almost unknown intervocalically. But it is also possible to guess in favor of *..h.., because ..h.. intervocalically alternates, and is sometimes in free variation with, ..k... If that choice is made, then the guess is that hoorasyI- B is from *fɔkɔrasyI- B, a close approximation to NJ hokorasíi 'prideful'. The final word, *fa(?C)asi-, however, is quite a different reconstruction from MJ wokasi- (NJ okasíi 'strange; funny'), with which it is undoubtedly related. Here internal reconstruction is of little help. While the MJ form is capable of predicting the Sd form, the reverse is not true. There is practically no evidence in Sd in the way of alternations or free variation for the melding of older intervocalic *..h.. with initial *w.., to yield the cluster hw... The best evidence is two sets of free alternants, hweeyum A // weheeyum A 'opens' and hwiiyum B // qwihiiyum B 'arises', and the latter has the added twist that it begins with qw.. in one of the alternants instead of the

have to be rewritten, if it turns out that the Monophthongization succeeded the change of *f to h. At this point, however, no such rewriting is necessary.

expected w... A lucky guess might have yielded *wakasi- B, but there was no free variation to base it on.

The pre-Sd vowels causing the Delabialization are the boxed ones in the vowel chart below



The final sound change of [Fu] to [hu] is now in progress, since the two phones are actually in free alternation, regardless of whether the etymological vowel is *u or *o.

The Alternation s / d

The alternation s / d, exemplified by seheE A 'wine' : kharaa#deheE B 'salty wine' [sic; ?'dry wine'], seems to suggest that there once was a native *z in Shodon dialect, and that that *z lost its sibilance, becoming a voiced stop, d. That change in turn must have occurred before the reintroduction of z in new loans from Japanese:

- 1) *z > d
- 2) NJ z -> Sd z

The phoneme *z may have been a fricative *[z] or an affricate *[dz], but note that dy is pronounced [dʒ], suggesting the affricate *[dz] for *z. We may therefore legitimately ask whether some t also has come from *[ts], or ty (= [tʃ]) from *[tʃ]. Note that thy is [tʃh]. I return to this problem in the discussion of *+sa below.

3.2.2.3 Adnominal-Compound Word Shape

I address here the issue of the age of adnominal compounds. Some have lost their compound boundary, as shown by lack of lengthening in the second member where lengthening is expected, and I would have liked to assume that they are the oldest, but see below. Others have a clear compound boundary, as shown by the lengthening behavior of second elements of the compound. Then there is a third, indeterminate, class.

The class of boundaryless compounds is:

yii#gooduro B 'itchy spot' (cf. thohooro B 'place')
 thahaaduro B 'high place' (" " " ")
 qahaasyimotI A 'red book' (cf. syimoOtI X 'book')
 huruusyimotI B 'old book' (" " " ")
 nyigyaagusurYI B 'bitter medicine' (??khsuUrYI X 'medicine')
 qumii#syryiihanasyI B 'an amusing story' (cf. hanaAsyI B 'story')
 nyibugamatyI B 'dull head' (cf. khamaAtyI B 'head')
 (?nyibuu..)
 dar'yami B 'evening drink (that allays weariness)' (--)
 hurtya B 'stale tea' (cf. thyaA B 'tea', and huruu.. B in
 huruusyimotI B, above)

Several problems crop up that will prevent any definitive statement from being made on the relative age of the boundaryless compounds vis-a-vis any others. First of all, two adjective stems themselves require internal boundaries in order to explain their irregular shape: yii#goo- B 'itchy' and qumii#syryii- B 'amusing'. Secondly, the word -syimotI~ 'book', a Sino-Japanese borrowing (cf. NJ syómotu 'book'), is used as the second member (non-bound alternant syimoOtI X [accent unknown]) of two compounds, and it seems somewhat doubtful that a compound of this type, if indeed it should be older than others, should have formed so late as to include such a borrowing in it. Third, there is the element nyibu- B 'dull', which is anomalous. Fourth, and most troublesome, any

of the words may be a nonce-compound utilizing second members that have long been in use as bound alternants. Thus probably the most use that can come of the forms of the above list is to draw the conclusion that such boundaryless forms have existed all along, and that their second members have been snipped off by analogy and used repeatedly for new coinages. This fact is especially obvious in the case of *-duro~*, the highly deformed alternant of *thohooro* B 'place'. (I have no proposal for how it acquired that shape.)

The class of compounds with boundary is:

- hwii#yaA* B 'big house' (cf. *yaA* B 'house')
quhuu#yaA B 'big house' (" " " ")
hyiryaa#yaA A 'low house' (" " " ")
hwkaa#goO B 'deep river' (cf. *khoO* A 'river')
qasaa#goO B 'shallow river' (" " " ")
hyiryuu#byiyaA B 'wide room' (also *-hyiyaA~*;
no non-bound alternant available)
nuk#byiyaA B 'warm room' (see above)
kip#hyiyaA B 'smoky room' (also *-byiyaA~*;
no non-bound alternant available)
khataa#myithyaA A 'hard earth' (cf. *myithyaA* B 'earth')
kwahaa#myithyaA B ' " " ' (" " " ")
qusuu#qyithaA B 'thin board' (cf. *qyithaA* B 'board')
hyis#qyithaA B ' " " ' (" " " ")
hwee#buniI B 'fast boat' (cf. *huniI* B 'boat')
qoo#hwaA A 'green leaves' (cf. *hwaA* A 'leaf')
sii#kuniIBU B 'sour tangerine' (cf. *kuniIBU* B 'tangerine')
thuu#gunyiI A 'far country' (cf. *kunyiI* B 'country')
yii#tyuU B 'nice man; man of importance' (cf. *tyuU* A 'person; man')
hyiryaa#dyiI A 'flat land' (no non-bound alternant of *-dyiI~*
available; but cf. *hur#dyimaami* B 'old gound nuts' [and *hur#.. /*
huruu#..])
kharaa#deheE B 'salty wine' (cf. *seheE* A 'wine')
khsaa#biI B 'smelly flatus' (cf. *hwil* B 'flatus')
kuraa#yuruU A 'dark night' (cf. *yuruU* B 'night(time)')
nyigyaa#naA B 'bitter rapeweed' (cf. *naA* B 'rapeweed')
qaraa#khutuuba A 'rough words' (cf. *khutuuba* B 'word')
quhuu#banuUsI B 'large yam' (cf. *hanuUsI* B 'yam')
(*hanuUsI* B is said to be a direct Chinese loan to Ryukyuan, related
to SJ *kánsyo* '[id.]', but *h-* for expected *k-* or *g-* is anomalous
(cf. Ch *gānshú*); note analogical voiced alternant *..#b..*)
thahaa#gyitaA B 'tall clogs' (cf. *gyitaA* A in *SdELex* 9,
gyithaA A in Martin 1970:117a, 'clogs')

walk]haa#nyiseE B 'young swain' (no non-bound alternant of -nyiseE~ available; note free variation of ..kh.. and ..h.. in this word)
 dar#duU B 'easily wearied body; weary body' (cf. duU B 'body;...')
 nur#yuU B 'tepid water' (cf. yuU B 'hot water')
 yur#qubyiI B 'loose sash' (cf. qubyiI B 'woman's obi; barrel-ring')
 khyit#tyaA A 'strong tea' (cf. thyaA B 'tea')
 qykkya#boO B 'a shorty' (no non-bound alternant of -boO~ available)
 hur#wataA B 'old cotton wadding' (cf. wataA B 'cotton wadding',
 with irregular ..ta.. for x ..tha..)

The class of indeterminate compounds consists of:

qyibaa(#)myityI B 'narrow road' (cf. myityI A 'road, path')
 thykyaa(#)myityI B 'shortcut' (" " " " ")
 khytaane(#)thinkyi B 'nasty weather' (cf. thinkyi A 'weather')
 yanaage(#)thinkyi B ' " " ' (" " " " ")
 qup(#)qyisyI A 'heavy stone' (cf. qyisyI A 'stone')
 kharuu(#)qyisyI B 'light stone' (" " " " ")
 khumaa(#)gyirYI B 'fine cutting' (cf. deverbal noun kyirYI B
 'cutting', with anomalous shape--expect x kyiryiI B)
 kuruu(#)qusyI B 'black cow' (cf. qusyI A 'cow, ox')
 syryuu(#)gyinU B 'white garment' (cf. kyinU B 'garment'
 --expect x kyinuU B)
 yanaa(#)gutyI B 'foul mouth' (cf. kutyI A 'mouth')
 syib(#)gakYI A 'sour persimmon' (no non-bound alternant available)
 (final consonant voicing of syib.. is anomalous)
 qus(#)gamYI B 'thin paper' (cf. khamYI A 'paper')

and of all compounds of which the second member is -munU~ 'thing; one',
 an example of which is waruu(#)munU B 'bad one'.

3.2.2.4 Adnominal-Compound Accent

As with almost all compounds, the accent of the second member of the compound is neutralized, and the accent of the first member becomes the accent of the entire compound.

In addition to the infinitive with +kU, there is also an infinitive with +sa, which is discussed shortly. Of interest here is the infinitive with +sakU, which is equivalent to either of the other two, and which is transparently created by using both infinitive suffixes in sequence: +sa+kU, a redundant construction. Naturally, it has to have been analogically created utilizing the two pre-existing infinitives +sa and +kU, so we know that it has come on the scene relatively late, compared to the other two.

3.3.1.2 *+ku Interaction with Enclitics and Other Material

The suffix +kU may be followed by pause, by inflected forms, or by the enclitics -ya, -nYI, or -m, or the combination -nyi-m, followed by an inflected form. I now briefly discuss the various combinations, any problems that they raise, and their reconstructions.

Forms with +ku

Forms that include +ku in them are:

+sa+ku A/B nee B 'is not...'
 +ku-n A naRyum B 'becomes...'
 +ku-m A nee B 'is not..., either'
 +sa+ku-m A nee B 'is not..., either'
 +ku-m A syum A 'is...also/indeed'
 +ku-nyi-m A/B naRyum B 'becomes...indeed'

(The capital R of naRyum B shows that r is optional, i.e., that r is in free variation with \emptyset .) Except for those vowels that are underlined, the alternant that appears is just what we expect:

+ku-n < *+ku-ni
 +ku-m < *+ku-mu/i
 +sa+ku-m < *+sa+ku-mu/i (Perhaps formed after Apocope/Syncope)

3.3 ADJECTIVE CONJUGATIONS

In this section I discuss the adjective conjugations and their history. I include the infinitive *+ku (+kU, discussed above), the finitive *+ka (+kha / +ka / +kya), the second infinitive *+sa (+sa / +sya / +ta / +tya), and the verbalization paradigm based on *a- B 'there to be', that is built on *+sa.

3.3.1 The Infinitive in *+ku

I have already discussed the origin of this suffix above. Here I focus on matters not already dealt with.

3.3.1.1 Interaction with Stems

For the sake of review, note that +kU always requires a vowel before it--since +kU itself has a high vowel, forming a *CVCECI (i.e., *CVCE+ku) or a *CVCICI (i.e., *CVCI+ku) word. These two etymological word types have the characteristic that they have a short vowel in their second syllable in NSd (= CVCVC) if it is closed or if the syllable is one other than the second, long otherwise. The sequence ..syku.. is interpreted as being /syiku/, and with the high vowel Devoiced, not Syncopated:(56)

thahak B / thahaaku-m B 'tall; high' (thahaA- B)
 hyisik B / hyisiiku-m B 'thin-1' (hyisII- B)
 hyikuk B / hyikuuku-m B 'low-2' (hyikUU- B)
 husyik B / husyiiku-m B 'desired' (husyII- B)
 hoorasyik B / hoorasyku-m B 'happy' (hoorasyI- B)

(56) For the shape of monosyllabic stems plus +kU, see the final paragraph of 3.3.2.1, a discussion of the monosyllabic stems plus the finitive suffix. That discussion applies to +kU as well.

I propose to explain the vowel of $+sa+ku$ A/B nee B (where x $+sa+k$ A/B nee B is expected) by analogy to $+sa+ku-m$ A nee B:

++	
$+sa+k!u!$	$-m$ A nee B
$*+sa+k!\emptyset!$	A/B nee B \rightarrow $+sa+ku$ A/B nee B
++	

Otherwise $*+sa+ko$ would have to be postulated, yet no reason for $*+ko$ is evident.

The explanation for $+ku-nyi-m$ A/B is the same as that for $mii\#hykyaaru+ku-m$ B (discussed above), if we are allowed to make a modification to the noun-plus-enclitic descriptions of the previous chapter. Otherwise it must be treated as an unexplainable anomaly within the internal reconstruction developed so far. Martin, in a note (1970:113n3), wonders if everything is all right with his noun data where $-nyi-m$ is concerned. He points out the $+ku-nyi-m$ form, of which he is quite sure; I might add that the pronominal forms given on Martin 1970:123 also support his doubts about the noun-plus-enclitic formulations:

'he, him; she, her':	
alone	qar B
Subject	qar $\emptyset\emptyset$ -ga B
Topic	qar $\emptyset\emptyset$ -ya B
Dative	qaryi-n B
Dative+Topic	qaryi-n-nya B
Dative+'also'	qaryi-nnyi-m B

These forms suggest that Martin's doubts are well-founded. The $..nyi-m$ form has a vowel before it, but with a geminate nn apparently due to analogical influence from the Dative+Topic form:(57)

(57) Note that this is a member of the small set of etymological two-syllable nouns / pronouns of B type with final high vowel that do not have the shape CVCV(V), the predicted shape.

+-+
 qaryi!n!nya B
 *qaryi!!nyim B -> qaryinnyim B
 +-+

If it turns out that in fact e.g. kúk-nyi-m (= kuk-nyi-m A) 'to the nail, too' is really kugyí(?í)-nyi-m (= kugyi(?i)-nyi-m A), or, by a reanalysis identical to that in the pronouns, kugyí-nnyi-m (= kugyi-nnyi-m A), then perhaps the best overall explanation for the shapes of Shodon dialect nouns may be one that posits a Lowering of a high vowel conditioned by a following high vowel, reiterated for any pair of high vowels, from left to right, until an entire sequence of high vowels has been Lowered, except for the rightmost:

Lowering:

I > E / ___ CI

(left-to-right iterative)

(A high vowel Lowers when followed by a high vowel in the next syllable; the process starts at the leftmost high vowel of an unbroken sequence of syllables with high vowels, and Lowers each vowel but the last, which the last iteration leaves untouched.)

Example: *kanasikunimu B 'cutely, too'

*kanasyekunimu B (first iteration)

*kanasyekonimu B (second iteration)

*kanasyekonyemu B (third iteration)

This Lowering will explain why a following high vowel is not palatalized by a preceding "high" vowel (that is, because it has already been Lowered), (58) and will automatically explain the difference between

(58) See for example hyikuk B 'low', which can be reconstructed as *fyekuku B even without this hypothesis (and as *fyekoku B with it), and compare NJ hikuku '[id.]'. Note the discrepancy in the vowel height in the first syllable. Without the Lowering hypothesis, it is necessary to set up a separate phoneme in proto-Japanese to account for the skewed correspondence, but with it, the form *fyekoku B is in turn reconstructed as *fikuku B, and no extra proto-Japanese phoneme is necessary. For a sketch of a theory requiring the extra proto-Japanese vowel, see Serafim 1977B. See also Hattori 1976.

*CVCICE (> CVCCV) and *CVCICI (> *CVCECI > CVCV(V)C(V))--the former is not in a Lowering environment, while the latter is. It requires that Lowered vowels not affect the lack of aspiration of their syllable (that is, Deaspiration must precede Lowering), and in addition it raises many other problems that cannot be treated here. The theory is worth pursuing if the noun treatment does in fact have to be changed. I have been unable so far to gather enough data to clear up this point.(59)

An Accent Anomaly

With atonic adjective forms only, both -nYI and -m act as accent reversers. An atonic form plus either -n or -m will be tonic, but with both -nyi and -m in sequence it will revert to atonic:

thahak B : thahaaku-n A : thahaaku-m A : thahaaku-nyi-m B
(thahaA- B 'tall; high')

But compare a tonic root:

(59) Yoro dialect (Hirayama et al., 1966:36A), an outlier of the Setouchi group, spoken on an isolated islet south of Kakeroma island on which Shodon is located, gives some interesting evidence in support of the Lowering hypothesis. Compare qin 'dog' < *enu < *inu with qyini 'riceplant' < *ine; and hir 'noon' < *feru < *firu with hyikyar 'light' < *fikari; cf. NJ inu, ine, hiru, and hikari, respectively. In addition there is mimit 'earthworm' < *memedu < *memidu < *mimidu; cf. NJ mimizu, with high vowels throughout. For the same meaning Sani dialect (northern tip of Amami Oshima) has meẽza, with further Lowering after the addition of the animal suffix *-a (and because of it), already encountered in the noun chapter, and with the superscript signifying nasalization. Both dialects have also depalatalized the Lowered vowel. However, the Lowering of the first syllable of the last example may also have been effected by the following labial consonant; cf. Yoro hema 'free time', which has never had a following high vowel. It is precisely the cases of following high vowels (as noted above) and following labial consonants where Progressive Palatalization is missing; this can be no accident. It must be because either type of Lowering precedes Progressive Palatalization, and thus deprives it of this set of inputs.

qahak A : qahaaku-n A : qahaaku-m A : qahaaku-nyi-m A
 (qahaA- A 'red')

I do not know what to make of this fact, which may be an innovation in the adjective conjugation, or it may be a holdover of something that once was also true for nouns. I know of no way to ascertain if either or neither statement is true.

Forms with +k

Forms including Syncopated +k are:

+k A/B naRyum B 'becomes...'
 +k A/B nee B 'isn't...'
 +k A/B syum A 'is...indeed'
 +k-kya A/B nee B 'isn't (red)'

In the first three examples +k is word final, where Apocope is of course expected. The form with +k-kya has an immediately following topic/contrast enclitic, which has a great many allomorphs, but only -kya after Apocopated ..kU or ..kYi or ..GU or ..GYI. It attaches to the Apocopated form if there is one, or, if there is not, it attaches to a preceding vowel as -ya.

This concludes the treatment of *+ku.

3.3.2 The Finitive from *+ka

There are two competing finite forms used in the imperfect, (1) the finitive from *+ka described here, and (2) the imperfect of the verbalization paradigm described below.

3.3.2.1 Shape Alternations of the Finitive

The finitive has three alternants, +kha / +ka / +kya. The alternant +kha appears after a vowel or after n:

+kha :

/ V ___ :

nagaa+kha B 'long' (nagaA- B)

hwee+kha B 'fast, early' (hweE- B)

quhuu+kha B 'large, big-2; plentiful, much/many' (quhuU- B)

qasaa+kha B 'shallow' (qasaA- B)

myii+kha A 'new' (myiI- A)

kha+wayii+kha B 'cute' (kha+wayiI- B)

qumii#syryii+kha B 'interesting, amusing' (qumii#syryiI- B)

/ n ___ :

qyin+kha B 'little-2, small-2' (qyinUU- B; only example with n)

The alternant +ka appears after a non-palatalized consonant other than n:

+ka :

/ C ___ :

khip+ka B 'smoky' (khiBUU- B)

qup+ka A 'heavy' (quBUU- A)

hyik+ka B 'low-2' (hyikUU- B)

dar+ka B 'weary' (darUU- B)

mii#hykyaar+ka B 'dazzling' (mii#hykyaarU- B)

hyis+ka B 'thin-2' (hyisII- B)

khyit+ka A 'overdone; too strong; strained, tired' (khyItII- A)

The alternant +kya appears after a palatalized consonant:

+kya :

/ Cy ___ :

hoorasy+kya B 'happy' (hoorasyI- B)

khanaasy+kya B 'cute' (khanaasyI- B)

husy+kya B 'desired' (husyII- B)

qaty+kya A 'thick' (?qatyII- A)

The aspirated alternant +kha appears whether or not the preceding portion of the word has a normally aspiration-suppressing segment in it (i.e., Ch, h, or s). The explanation for this is that an earlier alternation *+kha / *+ka, which depended on the existence or nonexistence of aspiration-suppressing consonants in the preceding part of the word, was leveled in favor of *+kha, the par-excellence form.

The alternant +kha appears after yii as well--there is no x +khya. Every one of those cases of yii has a long vowel. It may be that the etymological vowel was *ye (after all, *ye, a non-high vowel, is acceptable as input to Lengthening-2), or that Progressive Palatalization was not possible with a long high front vowel. The latter statement is of course contingent on the vowel having been long at the time of Progressive Palatalization. Since Lengthening-2 occurred after Apocope/Syncope, and since the latter occurred after Progressive Palatalization, it stands to reason that the results of Lengthening-2 could not have had an effect on whether any particular original *yi was or was not an eventual input into the Progressive Palatalization sound change:

- (1) Progressive Palatalization
- (2) Apocope/Syncope
- (3) Lengthening-2

Therefore the question becomes whether or not Lengthening-1 (if there was in fact such a sound change) had the looked-for effect. If Lengthening-1 is a phantom, a possibility discussed earlier in this chapter, then vowel length has always been a defining feature of a large number of words. This vowel length, in order not to have been predictable, and therefore in order to have been phonemic in the reconstructed pre-language, has to have occurred on unpredictable syllables; I suggested earlier that it might have occurred on either the first or second. This means that a *yi in the second syllable of a word with length in the first syllable should have been able to Palatalize a following (non-labial) consonant, if Progressive Palatalization preceded the shift of length to the second syllable:

Input	*CV:CyiCV(..)	*CVCyi:CV(..)
(1) Progressive Palatalization	*CV:CyiCyV(..)	*CVCyi:CV(..)
(2) Length Shift	*CVCyi:CV(..)	*CVCyi:CV(..)
Output	CVCyi:CV(..)	CVCyi:CV(..)

If forms such as *CVCyi:CV(..) are nowhere to be found, then one possibility is certainly that such a Length Shift never occurred, and that the hypothesis of original, unpredictable vowel length is wrong. Another possibility is that Length Shift occurred before Progressive Palatalization:

Input	*CV:CyiCV(..)	*CVCyi:CV(..)
(1) Length Shift	*CVCyi:CV(..)	*CVCyi:CV(..)
(2) Progressive Palatalization	*CVCyi:CV(..)	*CVCyi:CV(..)
Output	CVCyi:CV(..)	CVCyi:CV(..)

The fact is that there appear to be no cases of ..yiiCy.. in modern Shodon dialect, so that the ordering (1) Progressive Palatalization (2) Length Shift is out of the question unless the lack of ..yiiCy.. is simply fortuitous.

As mentioned earlier, however, it is possible that all present ..yii.. (or ..yiiI..) comes from *ye. Such a hypothesis would require all monosyllabic nouns with ..yiiI to come from *Cye, all dissyllabic nouns with ..yiiI to come from *CVCye (B), and all trisyllabic nouns with second-syllable ..yiiI to come from *CVCyeCI. Schematically it looks like this:

*Cye	A/B	>	Cyi(i)	A/B
*CVCye	B	>	CVCyi(i)	B
*CVCyeCI	A/B	>	CVCyi(i)C(u/(y)i)	A/B

And note that CVCCV (only B in nouns, probably due to collapse of the two accent types in the noun category)(60) comes from *CVCyiCE or

(60) Only some recent loans in the CVCCV noun category are A; all others are B. While there is no non-CVCCV alternant to act as locus for

*CVCuCE, and here *ye is unacceptable, since it would have yielded x CVCVVCV (e.g., x qabuura B?, instead of qapra B); here also, the last syllable of the etymological trisyllabic word is Palatalized by a preceding high front vowel:

gutyrya B 'whale' < *gud/tyira B = *gud/tira B
 (cf. NJ kuzira^ 'whale')
 qaknye B 'shopping' < *ak/gyinɛ B = *ak/ginɛ B
 (cf. NJ akínái 'doing business; buying and selling')
 masykyo B '(kind of bird)' < *masyikɔ B = *masikɔ B
 (cf. NJ masiko^ '(various types of red-hued finch)')

In every case the height of *yi (= *i) or *ye would be predictable, leading to ultimate pre-Shodon *i, a high front vowel. In the CVCCV case, there is no problem at all: the Progressive Palatalization occurred, followed by Syncope. In the case of the hypothesized *ye, each subtype may have to be treated individually, but the results are the same. The monosyllabic *Cye words became *Cye by virtue of their monosyllabicity, affecting both tonic and atonic subtypes, but without triggering aspiration. (If atonics were long to begin with, we must suppose something like *Ci: > *Cye: for the atonics and *Ci > *Cye (>...> *Cyé:) for the tonics.) The disyllabic *CVCi B words are also a special class, and became *CVCye B (if originally long in the second syllable, then *CVCi: > *CVCye:). The trisyllabic *CVCiCI type became *CVCyeCI, both for types A and B. This last change was probably conditioned by the following high vowel, but without causing any preceding aspirable stop to aspirate, as discussed above in the section

analogical restitution of type-A accent in the case of the nouns, all CVCCV type forms with *+ka as the final syllable have non-CVCCV alternants, and thus retain their type A tonicity, if they had it in the first place, on analogy with the type-A tonicity of their alternants, which have not been neutralized to type B.

on later-syllable catalectics.

I have strayed far from the form +kha. To review, it is not Palatalized by preceding yii, and this long excursus has explored the possibilities for why that should be. The strength of the *ye hypothesis is simply that it attempts to offer as general an explanation for several seemingly disparate phenomena as possible. All these changes have to have occurred before Progressive Palatalization.

To return to the environments for +kha, note that one form, qyin+kha B, has a consonant cluster with the second consonant aspirated ..nkh... The same phenomenon is observable in the case of the enclitic -khara / -hara / -kara 'from; by (a vehicle)', where both ..n-khara and ..n-hara are acceptable. This ..n+kh.. aspiration appears to be allowable only at morpheme boundaries. Another example is nan+kha B 'seven days'. Where a boundary has been deleted, the aspiration has disappeared: qanko B 'beanpaste jelly' (Martin 1970:110a; cf. NJ ánko '[id.]' <- án + +ko). Perhaps all such items are the result of borrowing; the light aspiration of a Japanese stop is suppressed in clusters, and the word may well be a recent cultural borrowing. Note that the vowel is also mid, as in NJ, and not the expected ..u.

Both the alternants +ka and +kya appear directly after consonants. They lack aspiration due to the sound change that suppresses aspiration in a consonant cluster. I assume that this sound change can occur whenever it has new input, but is barred from operating when a boundary is not dropped during the process of derivation. The boundary is normally dropped following all consonants save n, as pointed out above.

I assume that the boundary in these cases dropped at the time of the original derivation, and that time could have been either before or after Syncope; if before, the aspiration was automatically suppressed when Syncope created the *Ck consonant cluster; if after, it was suppressed upon derivation.

The alternant +kya is of course due to Progressive Palatalization, a phenomenon made all the easier to spot because the final consonants of the adjective stems in these forms retain their palatality, being the coronal obstruents sy and ty. The sequence was (1) Progressive Palatalization and (2) Syncope, with automatic aspiration suppression.

The only place where it is necessary to retain the "+" boundary is with ..n+kha. The boundary has been effaced in the case of ..Cka and ..Ckya. It has probably been effaced in the case of ..Vkha, but has to have been retained long enough for monosyllabic stems to acquire length, such as *mi+kA A >...> *myii+kha A or *myee+kha A >...> myiikha A 'new'. (61) An exception is yukhaa#tyuU B 'a nice man; a man of importance', where the adnominal version yukhaa# B seems to have lost its internal suffix boundary early enough to go through Lengthening as a unit, and Lengthened the suffix instead of the adjective stem.

3.3.2.2 Function and Distribution

(61) Note that with the infinitive suffix +kU, the stem will be long with the +ku alternant and short with the Apocopated +k alternant, which closes the preceding syllable.

In short, *+ka obeys all the rules for a suffix within the dialect, except that it is postvocally aspirated by analogy even when its aspiration should have been suppressed. There is some reason to believe, however, that this suffix is borrowed from Kagoshima dialect of Southern Kyushu.

As mentioned before, this suffix is used as an imperfective suffix, both adnominal and predicative. It is in competition with other forms in these functions:

..kha###	..sam###	[predicative]
..kha##N	..san##N	[adnominal]

There are two forms and only one function in each case. This is a typical occurrence in borrowing situations. (In the adnominal case there is the third possibility of using the adjective stem compounded with the noun, the so-called "nominalization." Martin points out (1970:134A) that this is used largely for descriptions of a particular noun that are "intrinsic rather than temporary or unusual.")

Not only are there competing forms, but the suffix +ka is one of two ways used in Kagoshima dialect of forming adjective imperfects, and comes from the medieval Japanese kari conjugation. The other Kagoshima method of adjective conjugation is apparently a borrowing, in its turn, from the prestigious Kyoto dialect of later times, and is in competition with the local adjective form in the case of many individual adjectives (for example yoka [< *yokari and *yokaru] // e [< *yoi < *yoki and *yosi]). Furthermore, the use of some form of the +kha suffix is widespread in the Amami island group, which was directly ruled by the Satsuma clan of the Kagoshima area after 1609; but the use of that

suffix in more southerly parts of the Ryukyus is practically unknown except for the equivalent of Sd yukhaa#tyuU B 'man of importance'. In Shuri the form is 'yukaQcyu B 'member of the aristocracy'.

The alternant +kya, however, must be explained. As I make clear in the chapter on comparative reconstruction, the Progressive Palatalization sound change occurred in prehistory, being shared by both Shodon and Shuri, yet Satsuma took over the Amami group relatively late, in the seventeenth century. Either Progressive Palatalization, like aspiration suppression in the CC case, kept occurring whenever it had new input (there is a certain amount of evidence for that, discussed in the verb chapter), (62) or else the alternant +kya was set up by analogy to other similar alternations, such as those obtaining among some noun enclitics and verb suffixes, to say nothing of the adjective suffix *+sa. In short, that alternant is not a problem for the borrowing hypothesis.

3.3.3 The Infinitive Suffix *+sa and Its Extensions

First I treat the allomorphs of *+sa, which depend on the preceding segment; then its combinations with following material, in particular the verb of existence *ar- B, which has led to a verblike paradigm called the verbalization.

(62) But it has to have stopped being possible by the time of Raising, because new high front vowels resulting from that sound change did not Palatalize following consonants.

3.3.3.1 Combinations with Preceding Morphemes

The infinitive suffix *+sa has four reflexes in NSd, sa / sya / ta /

tya. The alternants and their environments are as follows:

sa :

/ V ___ :

- hweesa B 'fast; early' (hweE- B)
 hagoosa B 'hateful, ugly' (hagoO- B)
 kuruusa B 'black' (kuruU- B)
 qusuusa B 'thin-2' (qusuU- B;
 cf. qusII- B 'thin-3', hyisII- B 'thin-1')
 qyikkyasa B 'short' (qyikkyā- B)
 quruusasa B 'annoying' (quruusa- B)
 myiisa A 'new' (myiI- A)
 kha+wayiisa B 'cute' (kha+wayiI- B)
 qumii#syryiisa B 'interesting, amusing' (qumii#syryiI- B)

/ C ___ (C ≠ t) :

- p: khipsa B 'smoky' (khiBUU- B)
 k: hyiksa B 'low-2' (hyikUU- B)
 n: qyinsa B 'little-2, small-2' (qyinUU- B)
 r: darsa B 'weary' (darUU- B)
 hyi+gursa B 'cold' (hyi+gurUU- B)
 s: hyissa B 'thin-1' (hyisII- B)

sya :

/ V ___ :

- ..#busya[?A] ?B 'wanting to [do]' (..#busyII-)
 hoorasya B 'happy' (hoorasyI- B)
 husya[?A] B 'desired' (husyII- B)
 hwaasya B 'funny' (hwaasyI- B)
 khanaasya B 'cute' (khanaasyI- B)
 khindurosyā B 'terrible' (khindurosyI- B)

/ C ___ :

- quthursya B 'fearful' (//quthurU- B / quthurUsyI- B//;
 also quthurasya B; only example of / C ___)

ta :

/ t ___ :

- khyitta A 'overdone;...' (khyItII- A)
 qatta B 'hot' (qatII- B)

tya :

/ t ___ :

- qattya A 'thick' (?qatyII- A; cf. qatykya A 'thick')
 yittya B 'good' (highly irregular adjective;
 this stem < *ye+tyi- B = *ye+ti- B)

Note that both sa and sya appear after a vowel, and that all alternants appear after a consonant, although sa and sya appear only after consonants other than t, and ta and tya appear only after t. Because of the heavy overlap in environments, we may assume that the original causes of the alternations have been obscured by later sound changes.

Note that there would only be two alternants, sa and ta, if the palatalized variants could be dealt with, and that that alternation could in turn be done away with if a sound change could be posited to account for s / t. I examine the issue of palatal alternants first.

The Palatalized Alternants

Palatality anywhere except before most cases of i is already known to be secondary, being either the result of Contraction or of Progressive Palatalization. Here it is unlikely to be the result of Contraction, because we have alternants sa and ta, which would not under any circumstances have resulted from *siya (or *siwa) or *tiya (or *tiwa). Thus Progressive Palatalization is the obvious candidate. Yet in no case is either sya or tya preceded by either a palatalized consonant(63) or the vowel yi. In fact the only place where yi appears is as a long vowel, yii, before the unpalatalized sa. I will assume the same inability to Palatalize of long yii, whether because of its length or because of its Lowering, that I did in the preceding discussion of the finitive suffix *+ka.

(63) See below for an amendment to that statement.

The remaining issue, then, is the cause of the Progressive Palatalization of *sya* and *tya*. The solution lies in observing the other alternants of each adjective stem. In each case the stem appears elsewhere with an etymological **Cyi* syllable at its end, either NSd ..*syII-* or ..*syI-* (both from **si*), or ..*ty-* (from **ti*). Progressive Palatalization therefore caused the palatalized-consonant alternations, followed, in the case of NSd *sya*, by loss of **si*, and in the case of NSd *tya*, by Syncope of the Palatalizing high vowel, seemingly leaving *t* as the stem-final consonant in this case. Thus in both cases the cause of the Palatalization seems to have disappeared after having its effects. For *hoorasya* B 'happy', for example, we would have expected x *hoorassya* B, with ..*ssy..*, and so on for the other adjectives of this type. (64) We have not encountered the complete loss of **si* up to now. The expected change would have been **si* > *sy* > *s* (= [ś]). The loss of **si* is

(64) According to Martin (1970:105b), the syllable-final consonants *s*, *sy*, *m*, and *n* are "pronounced without noticeable vowel-colored release," while syllable-final *t*, *ty*, *r*, *p*, and *k* are "pronounced with voiceless high-vowel release," a high, front, non-palatal, voiceless vowel, like the phonemic *i*. The latter statement is not true, however, for the palatalized homorganic sequences *tty*, *ddy*, *rry*, *ppy* (all with palatalized articulation through the entire gemination), or the non-palatalized homorganic sequences *tt*, *tn*, *dd*, *gg(w)*, *rr*, *pp*, or *bb*; both sets lack release after the first-syllable-final consonant (Martin 1970:107B), just as do clusters with *s*, *sy*, *m*, or *n* as their initial members. There has to have been a late sound change, ordered after Syncope and after syllable-final obstruent Devoicing, that deleted the vowel-colored release, which I will call Unreleasing. Since only sequences that have undergone Unreleasing are also voiced (they are a subset of the Unreleased sequences), I assume that Geminate Voicing Assimilation occurred only after Unreleasing. The historical sequence of changes is, then: (1) Syncope, (2) Unreleasing, (3) Geminate Voicing Assimilation. Martin points out (1970:107B) that [ś:] could either be written *sysy* or *ssy*, and favors the latter. Since *ssy* is geminate, I assume it has undergone Unreleasing.

encountered in the case of the alternant *sya*, and in the case of the Perfect and Gerund of the *s*-stem verbs, for which see the following chapter. It is also encountered in Shuri dialect in the words *haaya* B 'pillar' < **faarya* B < **faasirya* B < **faasira* B (cf. NJ *hasira*^ '[id.]'), *hayuN* B '(animals) run' < **faryomu* B < **fasiryomu* B (cf. NJ *hasiru* '[id.]'), and *tiracyagayuN* A 'shines brightly' < **terakyagaryomu* A < **terasi#kagar..* A (no NJ or earlier mainland equivalent compound, but the Sr verb compound is equivalent to NJ *terasú* 'lights it up' and *kagari*^ 'iron bonfire cradle; bonfire, beacon fire' [cf. Serafim 1977A:34]). The change is very early, preceding the later, south-Amami Apocope / Syncope sound change, and is shared by both Shuri and Shodon dialects. It is therefore very likely to have occurred no later than proto-Northern Ryukyuan. It affects the sequences *..sir..., *..sis..., *..sit..., and *..sik..., at least.

For *qattya* A 'thick' we get the expected final consonant for a geminate, although the stop articulation of the suffix has yet to be explained.

The allomorph *sya* appears after *r* as well, only in the word *quthursya* B 'fearful', which has a competing form *quthurasya* B '[id.]'. This adjective is irregular, but not so much so that the pre-forms of the two competing modern forms cannot be reconstructed. Here are the available forms:

<i>quthuruUkU</i> B	
< * <i>o/utoro/u+ku</i> B	
<i>quthurka</i> B	
< * <i>o/utoro/u+ka</i> B	
<i>quthursyam</i> B	<i>quthurasyam</i> B
< * <i>o/utoro/u+si+sa..</i> B	< * <i>o/utora+si+sa..</i> B
<i>quthuru(#)munU</i> B 'fearful thing'	
< * <i>o/utoro/u#mo/unu</i> B	

The infinitive, finitive, and nominalization show no signs of $+syI-$, and in this regard this adjective is similar to the ambivalent-stem adjectives, which have no $+syI-$ in the infinitive and nominalization, although they do have it in the finitive. Both 'fearful' and the ambivalent stems have the alternant sya for the infinitive from $*+sa$, suggesting that $quthurU.. B$ is an ambivalent stem gone irregular. Thus the reconstruction is $*o/utoro/u+si+sa B$ for the infinitive in $*+sa$. The first vowel may be either $*o$ or $*u$; there is not enough information to choose one over the other. The second vowel is definitely $*o$, because of the aspiration of the preceding consonant. The third vowel would normally be expected to be $*u$, but this may also be a case of the loss of a second identical vowel (and therefore $*o$) discussed in the preceding chapter. There was an intermediate form $*o/utoro/u+sya$, because the sequence $*si$ was lost before Apocope / Syncope, as explained above.

The Non-Palatalized Alternants

The alternant sa appears after consonants other than t , and after vowels in adjectives whose pre-infinitive stem does not end in $..yII$ (e.g., $husyII- B$), as opposed to $..yII$ (e.g., $myII- A$). The alternant ta occurs only after t .

As pointed out earlier, for any geminate consonant sequence that is followed by y (i.e., CCy), the entire sequence is considered palatalized, and for non-palatal geminate sequences (i.e., CC), of course none of the sequence is palatalized. Therefore the first t of tty is considered palatal, and the first t of tt is not. The result of

this is that we can actually consider even the surface environments of the alternants *ta* and *tya* to differ. The non-palatility of the stem-final *.t-* of, e.g., *qat-* B 'hot', or *k[ʔh]yit-* A 'overdone, (etc.)' is thus perfectly consonant with the non-palatility of their forms with *ʔkU*: *qatilkU* B, *khyitilkU* A.(65) The final syllable of both stems is reconstructible as **tu* (recall the earlier-reconstructed sound-change sequence **tu > *ti > ti / tI / th / t*), and of course **u* had no effect on the following syllable before undergoing Syncope.

The alternant *sa* is of course the "elsewhere" case--if no sound change has affected the original shape, it remains just as it was. As noted earlier, long *yii* has been incapable of causing Progressive Palatalization, so **sa* did not become *x sya* in the case of preceding *yii* in single-syllable stems (*myiisa* A 'new'), or stems whose vowel was lengthened in other positions (*kha+wayiisa* B 'cute'--the stem of which is a recent Sino-Japanese borrowing--and *qumii#syryiisa* B 'interesting, amusing'--which I suspect as having been borrowed at a time when *yii* in this word had not yet undergone Progressive Palatalization, that is, was still **ii*, and was itself raised from **ee* in *?*omosiree*). There is no trace of any other preceding Palatalizing vowels, and the remaining cases subdivide into those where *sa* is preceded by non-Palatalizing vowels, or preceded by consonants other than *t*. Not all possible syllable-final consonants are represented; *sy* has of course disappeared, and *t* and *ty* are seen elsewhere. The consonant *m* is missing, presumably

(65) But note that we are also required to interpret the first *t* of *khyittyaa* A 'strong tea' as palatal, so that spreading of palatility occurs in either direction whenever a geminate sequence is formed.

simply by chance. The represented consonants all have alternants with Cu, as we would expect from the lack of any Progressive Palatalization effects on sa. The alternations in final position are as follows, with reconstructed forms:

..p- / ..buU- (i.e., ..BUU-) < *..bu-
 ..k- / ..kuU- (i.e., ..kUU-) < *..ku-
 ..n- / ..nuU- (i.e., ..nUU-) < *..nu-
 ..r- / ..ruU- (i.e., ..rUU-) < *..ru-
 ..s- / ..sil- (i.e., ..sII-) < *..su-

Thus, just as with the case of the alternant ta, the sequence ..Csa turns out to be from *..Cusa, but with the only difference being that ta is preceded by *tu, while sa is preceded by any consonant (that occurs) other than t plus *u.

Sibilant Versus Stop

By now it is quite obvious that it is the preceding t or *ty that caused the alternants ta and tya, respectively, and it is interesting that these alternants provide some evidence as to the earlier pronunciation of tyi and ti. The morpheme *tsa is a suffix, not an independent lexical item. For suffixes I claim that *ts > tt is a regular change within Shodon; it is different from the change *ts > ss seen in compounds. This claim requires that the enclitic -syi 'as; by means of, with' be seen as something other than an ordinary enclitic, in order that it not interfere with the above claim. I claim that it was originally a separate word, the gerund of the verb syum A 'does' (the gerund is now syiI A), and that it originally functioned not as an enclitic but as the second member of a compound, in the process losing

its vowel length.(66) Note that it would be x syI (e.g., x -sy / x -syi-m 'with / also with') if the pre-form had been x *-si. There are no other cases of an enclitic beginning with s.

If, then, the changes **..t+s.. > ..tt..* and **..ty+sy.. > ..tty..* are the expected ones, how, in particular, is this change evidence for the earlier phonetics of *tu and *ti? There is no good phonetic reason for either the sequence *[ts] or *[tʃ] (where [ʃ] is a palatalized consonant) to become tt or tty, respectively. But if *tu was *[tsu] and *ti was *[tʃi], as they are in most Japanese dialects, then Apocope/Syncope would have resulted in *[ts] and *[tʃ] for the remaining syllable-final consonant, respectively. This in turn would mean that *ts and *tysy would at that time have been *[ts:] and *[tʃ:], respectively. I propose that there would have been an intrusion of the syllable-final affricate into the beginning, semi-homorganic, consonant of the following syllable, by means of lengthening of the initial of the affricate and shortening of the following fricative, so that *[ts:a] became *[t:sa] and *[tʃ:a] became *[tʃ:sa]. This is quite similar to the changes that must have occurred to get the doubled-consonant topic-enclitic forms seen with Apocoped final vowels of nouns, such as in *fabu-ya A 'snake' > *hap-ya A > hap-pya A. If the reapportionment of *[ts:] to *[t:s] and of *[tʃ:] to *[tʃ:s] then was followed by a simplification of affricates to stops, the result would be exactly what is seen today, namely [t:] (= tt) and [tʃ:] (= tty), respectively.

(66) It may not have been long originally. The pre-form is *site A (see the next chapter), and a special word-initial sound change converted this to (?*ssye >) *sye, probably long before any lengthenings.

Schematically the above discussion is as follows:

	*[ts:a]	>	*[t:sa]	>	[t:a]	=	..t+ta		
			*[t̥s:a]	>	*[t̥:sa]	>	[t̥:a]	=	..t+tya
*[hápya]					>	[háp̥:ya]	=	hap-pya A 'the snake'	
*[mátsya]	>	*[máts̥:a]	>	*[máts̥:sa]	>	[máts̥:a]	=	mat-tya A 'the town'	

If we look at the dialects around Shodon, we discover that both Apocope/Syncope and Deaffrication seem to go hand in hand in this area. Hattori et al. (1959B:443-444) have data on the word for 'hot/warm' (qatta B in Sd) in many Ryukyuan dialects, and *+sa appears as ..(CV)sa.. in most Ryukyuan dialects, but in the Setouchi area of southern Amami Oshima it appears either as ..(t)tsa.. (Ishihara) or as ..(t)ta.. (Heta, Koniya, and Shodon). Ishihara provides the transitional case.

3.3.3.2 Combinations with Following Morphemes

I have already treated the redundant double infinitive +sa+kU above. Here I will introduce the verbalization paradigm, which is formed by combining the suffix *+sa with the existential verb *ar- B 'there to be (inanimate)'.

The paradigm of the verbalization is as follows, in outline, using the NSd ..sa.. alternant of *+sa for the sake of brevity of exposition; the alternants of the verbalization are parallel for any particular adjective to those of *+sa. Functionally identical parts of the paradigm of qam B 'there to be (inanimate)' are set alongside for comparison.

Imperfect:	+sa+m	qa+m B
	+sa+n	qa+n B
	+sa+r	qa+r B
Perfect:	+sa+ta+m	qa+tha+m B
	+sa+ta+n	qa+tha+n B
	+sa+ta	qa+thaa B
Gerund:	+sa+ti	qa+thi(?I) B
Infinitives:	+sa	(qa+yi- B)
	+sa+kU	

I assume that the paradigm was formed at a time when the glottal stop was not yet phonemic, and that the sequence $*..+sa\#a.. = *[saa]$ became $*[sa]$.(67) Note that aspiration is present in the perfect and gerund of the independent verb, but not in the adjective verbalization. This is because the preceding s has deaspirated th to t. A bit more has to be said, however. In the verbal paradigms +tha and +thi behave just as the finitive +kha does in the adjectival paradigm. That is, they are aspirated when they follow a vowel or n,(68) regardless of any preceding deaspirating environment. But the adjective verbalization has escaped this reanalysis, which is in effect a restitution, because it is no longer a verbal paradigm, but an adjectival one, even though it uses verbal endings.

Note the difference between the ending +ta in the verbalization and the equivalent +thaa in the independent verb. The latter was subject to Lengthening, while the former was out of an environment for it, not

(67) This is parallel to the fusion that resulted in the earlier-mentioned kari conjugation of mainland Japanese, where vowels coming into contact at a boundary also simplified down to one vowel: $*..+ku\#a.. > ..ka...$

(68) This is a simplification--see the next chapter for details. An example of +thi following a vowel, and in a deaspirating environment, is qukhiithi B 'receiving', and of +thi following n, khakanthii B 'didn't (s)he write?'

being in the second syllable of the adjective. The compound word boundary was not present when Lengthening occurred. This suggests that the compound is older than the Lengthening sound change that produced the length of the independent verb.

The infinitives of the verbalization of the adjective are obviously not derived from the verb. They are entirely different--both are primitive. Functionally they are perfectly equivalent to the infinitive +kU.

For details on the Imperfect and Perfect, see the next chapter.

Chapter IV

SHODON VERBS

4.1 MAIN CONJUGATION TYPES

In this chapter I depend more heavily on SdELex than I did in the previous two chapters, because in it Martin gives a full form for each of four paradigm slots for every verb, whereas his treatment in Martin 1970 (125-133, 137-138) is very synthetic, with forms predicted from allomorphs, utilizing the rules given there, and only exceptions are noted in their actually occurring forms.

There are two main conjugation types in Shodon dialect, just as in standard Japanese, the consonant-stem verbs and the vowel-stem verbs. Each of these has subtypes, as in Table 6 below.

The listing of verb types and subtypes in Table 6 is not exhaustive, but rather representative. The items have been arranged in columns according to the suffix, and in rows according to the lexical morpheme. Blanks have been placed in order to line up corresponding segments as precisely as possible on either side of the plus sign, which shows the morpheme cut. In the column showing the perfect forms, there is an entire column of zeros; this is where preceding and following columns of forms have columns within them with some aspirated forms. This would have been needed if columns and rows were switched around, to give, e.g.:

Table 6

Shodon Verb Types and Subtypes

	Imperfect	Infinitive	Perfect	Tentative Accent	Gloss
..C-					
..k-	nakh+yum	nakh+yi-	na__+t_yam	nakh+_oo	A cries
	khak__+yum	khak__+yi-	kha__+t_yam	khak+_oo	B writes
..g-	qwiig__+yum	qwiig__+yi-	qwii__+d_yam	qwiig+_oo	B swims
..s-	thas__+yum	thas__+yi-	tha__+t_yam	thas+_oo	A adds
..t-	math+yum	math+yi-	mat__+t_yam	math+_oo	B waits
	that__+yum	that__+yi-	that__+t_yam	that+_oo	B stands
..n-	syin__+yum	syin__+yi-	syi__+d_yam	syin+_oo	A dies
..m-	yum__+yum	yum__+yi-	yu__+d__am	yum+_oo	B reads
..b-	yub__+yum	yub__+i-	yu__+d__am	yub+_oo	A calls
..r-	quR__+yum	qur__+i-	qu__+th__am	qur+_oo	A sells it
..V-					
..i-	qukhii__+yum	qukhi__+__-	qukhii__+th__am	qukhii__+roo	B receives
..e-	wasre__+yum	wasri__+__-	wasre__+th__am	wasre__+roo	B forgets

nakh+yum
nakh+yi-
na__+t_yam
nakh+_oo

with suffixes not corresponding but with lexical morphemes lined up vertically. While accents are given as A or B, in fact all tentatives are regularly B (with some exceptions noted by Martin), just as, in Japanese, tentatives of atonic verbs are optionally tonic, while tentatives of tonic verbs are always tonic. In the table I have corrected what I believe to be mistakes; they are:

Serafim	Martin
nakhoo	nakoo
thatyi-	thathyi-
thatoo	thathoo
(qukhiiroo	qukhi(i)roo)

The final item, qukhi(i)roo, is not really a correction; if the tentative form, which ends in a long vowel, has a long vowel in its

penultimate syllable, and if the word is three or more syllables long, then the penultimate long vowel may be shortened without any change in meaning.

4.2 THE HISTORICAL DEVELOPMENT OF THE INFINITIVE

4.2.1 Aspiration at the End of t- and k-Stems

Two examples each of k- and t-stem verbs have been given in the verb table above. They differ in that one of them has no aspiration at the end of the stem, and the other has it. The differences between them are to be seen in all but the perfect, among the forms listed in the table. To reprise, the verbs in question are as follows, with "CH" added underneath each double column where aspiration might be--but is not necessarily--seen:

	Imperfect	Infinitive	Perfect	Tentative	Accent	Gloss
..k-	nakh+yum	nakh+yi-	na__+t_yam	nakh+oo	A	cries
	khak__+yum	khak__+yi-	kha__+t_yam	khak__+oo	B	writes
..t-	math+yum	math+yi-	mat__+t_yam	math+oo	B	waits
	that__+yum	that__+yi-	that__+t_yam	that__+oo	B	stands
	CH	CH	CH CH	CH		

In the tentative it can be seen that the aspiration or lack of it is based on the rule that blocks aspiration of t or k with etymological non-high vowels if t or k is preceded by another aspirated consonant, s, or h. This is quite regular. Problems arise, however, upon examination of the infinitive and the imperfect.

The infinitive in the forms in question ends in +yi-. This is an etymological high vowel, as shown by the fact that it Apocopates (see below). This is not a case of *.iC(h)e- (with final mid--not high--vowel), with Progressive Palatalization and Raising yielding

..C(h)yi-. If it were, Apocope would be impossible, because of the etymological non-high vowel involved. Compare, for example, the gerund forms (also discussed below), where Progressive Palatalization and Raising have sometimes yielded ..thyi-, exactly the same shape as the aspirated infinitive of t-stem aspirating roots, but where neither this nor any other gerund is capable of Apocope. This result for gerunds is directly attributable to their having come from *+te, with a mid vowel. The effect of the aspiration of the final consonant of a monovocalic root is that, in Apocope, aspiration disappears along with the vowel. This is the only environment where such aspiration loss is possible, because aspiration in this position in consonant-stem infinitives is analogically inserted. There is no other place in the lexicon with such aspiration.

4.2.2 Arguments from Allomorphy

The infinitive suffix has three allomorphs:

+yi-
+i-
+∅-

This listing of allomorphs does not include any length alternations, such as when the infinitive form appears utterance-finally, or when an enclitic is added. The lack of such inclusion is shown by appending a hyphen to the allomorph. For most verbs SdELex gives only one form, with a question mark as to any other possible form. For a few verbs, two forms are given, the second one sometimes also with a question mark. I treat the shape alternants of infinitive forms later in this section,

insofar as possible.(69)

The allomorph +yi- appears only after consonant stems, save for those ending in r or b, after which the allomorph +i- appears. The allomorph +∅- appears only after vowel stems, and all infinitive stem-final vowels are ..i+, regardless of whether ..i+ or ..e+ appears in other parts of the paradigm as the stem-final vowel, thus in fact parallelling the utterance-final pronunciation of the r- and b-stem verbs, except for some vowel-stem verbs where Progressive Palatalization has yielded ..yi+.

One fact that is not apparent from the above table is that at least some infinitives of r- and b-stem verbs Apococate in the appropriate environment, just as some of the other consonant-stem infinitives do. The operative principle is the same as in nouns, that type A infinitives are (V) and type B infinitives are V(V). For example, utterance finally, the infinitive of quRyum A 'sells' is qur A, and the infinitive of yubyum A 'calls' is yup A, despite the fact that their non-apocopated forms are, respectively, quri- A and yubi- A, both with a seeming etymological mid vowel *e.

There are only three verbs listed in SdElex that have CVCV(V) B infinitives, and those are:(70)

- (69) These forms were elicited in an environment where length distinctions are obliterated, as with following -m 'also, even'. (Martin, p.c.)
- (70) There are three examples of CVCV(V) A, as well, something unexpected from the investigation of noun shapes. However, it should be noted that all of these are in free variation with the special A' tonic accent first encountered in the previous chapter. The forms in question are:
 hykyiI A : hyikYI A' pulling

thkyiI A : thikYI A' adhering, sticking
 khykyiI A : khyikYI A' hearing

The verb pairs in question are the results of analogical remodeling and subsequent competition of variants. The remodeling obviously has something to do with the high front vowel in the first syllable, which in the A' variant is always voiced and accented, and which in the A variant is never voiced and never accented; in short, the allomorphy that would have resulted from normal Apocope (i.e., *hykyi-m A : *hyik A) has spawned two competing parts of the paradigm for the infinitive, each modeled on one of the alternants, and neither exhibiting any alternation in the first vowel. This analogically derived infinitive free variation has then served as the basis for the complete split of each of the two paradigms. This belies what happens in the noun apocopating dissyllable paradigm, where there is one example of an alternation in the first syllable, skyi-m A : sik A 'plow (, too)'. Note that there was no choice but to analogically create a tonic expanding dissyllabic form hykyiI A, thkyiI A, and khykyiI A in the variant that left the first syllable with a voiceless vowel, that is, the variant based on *hykyi-.. A, *thkyi-.. A, and *khykyi-.. A. (Recall that noun CVCyiI A forms are not derived from pre-Sd by regular sound change, but that they must enter the language either by analogy, as here, or by borrowing.) Thus for both variants any alternation that occurs is confined to the second syllable.

One more fact about the variants thik- A' and khyik- A' that should be noted is that the first syllables thi.. and khyi.. bear an irregular relation to their ancestral *tu.. and *ki.., again through analogy. According to the sound change rules adduced so far, the roots of thkyum A and khykyum A should be *tuk- A and *kik- A, and those of thikyum A' and khyikyum A' should be *tek- A' and ?*ke(w)ik- A'(/?*ikek- A). It has already been discovered that "*A'" is a phantom category for pre-Sd, resulting from analogy. Naturally it is expected that the variants *tek- and *ke(w)ik- are also phantoms resulting from analogy, since (1) internal reconstruction seeks to reduce allomorphy as much as possible, and (2) it has already been noted that an etymological high vowel in the first syllable seems to be necessary to drive the analogical engine that creates A' forms. The forms thik- and khyik- were analogically created on comparison with thk- and khyk-. The latter two are the normal reflexes of *tuk- and *kik-, on the basis of the proportional analogy A : thk- :: A' : X (where X = thik-), and A : khyk- :: A' : X (where X = khyik-). A vowel is expected, and that vowel must reflect the palatality (or not) of its source voiceless syllable; and there is aspiration in the voiceless syllable, analogically adopted in the voiced variant as well, and thus phonologized. There may well have been a secondary analogy at work here as well: hyk- : hyik- :: thk- : X :: khyk- : Y (where X = thik- and Y = khyik-); here the aspiration is affected by the always-phonemic h (the aspirate par excellence) of the first form.

One more observation needs to be added. HUT 1959B has the forms syinyum A' 'dies' (independently recorded by Martin as A) and yithyum A' 'is sitting'. If my interpretation of the HUT 1959B

- (1) sakyum B : sakyiI B splits it in two
- (2) styum B : styiI B likes(71)
- (3) yumyum B : yumiI B reads; counts

There are eleven examples of type A and A' infinitives with CVC(V) A(')
shape:(72)

- (1) hyikYI A' pulling
- (2) khyikYI A' hearing
- (3) mumYI A pounding
- (4) nakHYI A crying
- (5) syinYI A dying
- (6) thasYI A adding
- (7) thikYI A' adhering, sticking
- (8) nar_I A sounding
- (9) qur_I A selling it
- (10) thuB_I A flying
- (11) yuB_I A calling

accent marks is correct, these words have to be added to the ranks of the A' type, and then the interpretation given above may become untenable. Assuming that these are real forms, then it may be that the forms discussed above served as the locus for analogy to verbs that did not originally have voiced/voiceless-vowel alternations in the first syllable, but do share etymological high vowels.

- (71) This verb is irregular, in that its perfect form is styam B, while that of a regular t-stem verb would have been x sittyam B. From comparison with NJ súk- '[id.]', it can be seen that the verb is a reanalysis from a k-stem. It must once have been *skyum B (imperfect), *skyiI B (infinitive), *styam B (perfect), *styI B (gerund). The perfect, gerund, and other t-stem forms that lack the final consonant of the stem (*.k-) are the sources of the reanalysis from *sØ-t.. to st- B. See below for details on all mentioned portions of the Shodon verb paradigm.
- (72) There is also one example of a type B infinitive with CVC(V) shape:
kyirYI B cutting it
While the accent is an exception for an apocopating dissyllable, or then again for the shape of a type B infinitive, it should be noted that there is an allomorph ..gyirYI~ 'cutting', seen in the noun compound khumaagyirYI B 'fine cutting'. I assume that the independent infinitive has been influenced by the form in this and similar nouns, the shape of which is regular for second members of compounds from which the internal compound boundary has been deleted.

These are precisely the forms expected of apocopating dissyllabic nouns, which are almost exclusively of type A accent. (See the discussion of noun shape in the Shodon noun chapter.) All nouns of this type have an etymological high vowel, either *i or *u, in their second syllable. But note that four of the forms listed above have final ..I, not etymologically a high vowel, but rather a normal reflex of *..e, except for the fact that it Apocopates. In no other part of the vocabulary except in infinitives and in infinitive-derived deverbal nouns is this Apocopating ..I seen.(73) The explanation is of course analogy.

There are several deverbal nouns with ..yi- that are related to infinitives, although it must be kept in mind that not all deverbal nouns are of this unusual type. Examples of both types of deverbal nouns are: (1) with ..i-: khahaArI B 'person in charge' : khahaArI B 'hanging'; (2) with ..yi-: (a) khamnarYI B 'thunder' (lit., 'god-sounding') : narI A 'sounding', (b) khoOrYI B 'ice' (HUT 1959B khooryi A '[id.]' ("new")) : khoori- A 'freezing' (HUT 1959B), (c) naryiI B 'fruit' (HUT 1959B) : nari- B 'becoming', (d) qasiIBYI A 'holiday, celebration; play, game' : qappi A(74) 'playing' (see more on this verb below). In line with the hypothesis to be presented below, the deverbal (compound) nouns with ..yi- are to be seen as being older than those with ..i-, (but in the case of khooryi A, a very recent loan,

(73) This Apocopating ..I that is seemingly from *e is not to be confused with other Apocopating ..I from *u, which appears only after s, t, or d. Both these Apocopating varieties of ..I are of course associated with type A accent, while expansive dissyllables, associated with type B accent, have ..iI.

(74) There are no other free variants of this infinitive. (Martin, p.c.)

with *..yi-* reintroduced from NJ) and constitute independent evidence for the older forms, thus buttressing the analogy claim made below.

Henceforth I assume that all etymologically *CVC+I consonant-stem-verb infinitives of type A accent are of the apocopating-dissyllable word-shape type (= CVC(V)), and that all those of type B accent are of the expansive-dissyllable word-shape type (= CVCV(V)), with the exception of the already-discussed infinitives that come from *CIC+i A.

Note that only members of the r-stem and b-stem infinitives have the Apocopating *..I*. All others have *..YI*. Since all CVCV- A infinitives are of the Apocopating type, and since there are some indications from deverbal nouns that the infinitives formerly had *..YI*, there has to have been some source for a reanalysis of the infinitives as having *..I*. That source is the gerund forms, which are formally and functionally very similar to the infinitives. Note the correspondences in Table 7, which follows.(75)

(75) Examples of types r-2, r-3, and r-4 in the table are:

r-2:

qam B : qathi- B 'it is/exists',

wum A : wuthi- A '(s)he is/exists',

~to(o(wo))m B // ~taawom B : ? ~to(o(wo))thi- B // ? ~taawothi- B
'(polite suffixal verb)',

~tnsyom B // ~tnsyaawom B : ? ~tnsyo(?o)thi- B // ? ~tnsyaawothi-

B

'(exalting suffixal verb)',

qumooRyum B : qumoothi- B '(s)he is/exists' (exalting; r-2');

nem B : nenthi- B 'there isn't' (no ne(?e)ryi- B recorded;

r-2''),

r-3:

kyiRyum A : khytyi- A 'wears',

kyiRyum[B : khytyi- B 'cuts',

syIryum A : sytyi- A 'finds out, knows' (HUT 1959B syityum B);

yiRyum A : yityi- A 'sits down' (HUT 1959B yithyum A 'is seated'),

Table 7

Infinitive-Gerund Correspondences

Stem Type	Infinitive	Gerund
<hr/>		
..i : ..i:		
r-1	..ri- :	..thi-
b	..bi- :	..thi-
v	..Ci- :	..thi-
<hr/>		
..yi : ..i:		
m	..myi- :	..di-
r-2	..oo/u/aryi- :	..oo/u/athi-
<hr/>		
..yi : ..yi:		
k-1	..khyi- :	..tyi-
k-2	..kyi- :	..tyi-
g	..gyi- :	..dyi-
t-1	..thyi- :	..ttyi-
t-2	..tyi- :	..ttyi-
s	..syi- :	..tyi-
r-3	..yiryi- :	..yityi-
r-4	..yiryi- :	..yittyi-
<hr/>		

The correspondences basically fall into three groups: (1) where both infinitive and gerund end in ..yi-, (2) where both infinitive and gerund end in ..i-, and (3) where infinitive and gerund do not match. My claim is that a reanalysis has worked its way through the b-stem verbs, and through the r-1 subset of the r-stem verbs, leaving untouched the m-stem verbs and the r-2 subset of the r-stem verbs. The ..yi : ..yi set of verbs remained unaffected in shape, including the r-3 and r-4 subsets of r-stem verbs. The basis of the reanalysis is the wrong generalization

qyikryum B : qyiktyi- B 'lives' (r-3'),
sikRyum B : siktyi- B 'exceeds' (r-3'),
r-4:
qyi(?R)yum A : qyittyi- A 'enters',
qyi(?R)yum A : qyittyi- A 'needs'.

by speakers that infinitives agreed with their gerunds in syllable-final palatality, driven by the semantic similarity of the infinitive and gerund. The evidence is threefold: (1) the seeming *e that Apocopates like an etymological high vowel, (2) traces of former palatalized infinitives in the infinitive-derived deverbal nouns, and (3) certain changes in vowel-verb final vowels in infinitive position only, detailed below.

The fact that the phantom *e Apocopates like an etymological high vowel (the first of the pieces of evidence given above) also suggests that the reanalysis took place after Raising, since at that point only the palatal quality of the vowel would need to change, but not its height.

The reanalysis is in the form of a proportional analogy:

R-STEM INFINITIVE REANALYSIS-1:

gerund : [-palatal] :: infinitive : X

X = [-palatal]

(A gerund is to lack of palatality as an infinitive is to X;
X equals lack of palatality.)

There is another proportional analogy implied by this one, namely the other side of the coin:

R-STEM INFINITIVE REANALYSIS-2:

gerund : [+palatal] :: infinitive : X

X = [+palatal]

(A gerund is to palatality as an infinitive is to X;
X equals palatality.)

These may be joined together into a single super- proportional analogy:

R-STEM INFINITIVE REANALYSIS:

gerund : [+/-palatality] :: infinitive : [X]

X = [+/-palatality]

(The palatality of an infinitive is the same as that of the corresponding gerund.)

The list of gerund and infinitive correspondences above includes three subtypes of r-stem verb: (1) the unmarked type, r-1, with any vowel preceding r save etymological *i; (2) one of the two marked types, r-3 or r-4, with etymological *i before final r; (3) the other marked type, r-2, including the two verbs of existence wum A and qam B, and the exalting verb equivalent to the former, qumooRyum B. I assume that the unmarked type (r-1) always had ..thi- (a non-palatal alternant of the gerund), and that *.ryi- changed to ..ri- by analogy, as stated above. Agreement of infinitive and gerund in palatality holds true for the second subtype (r-3 or r-4), too, since Progressive Palatalization from the preceding *i guaranteed both the shape of the gerund and the infinitive as palatalized, and reanalysis did not require any change. But reanalysis did not affect the third subtype (r-2), perhaps because of the very high frequency of the words in question.

Frequency cannot be called upon to explain the lack of correspondence of palatality between the infinitive and gerund of m-stems, however. These simply remain beyond the pale of the reanalysis, and I have no satisfactory explanation for ..myi- not having changed to x ..mi-, even though it met the conditions for the reanalysis.

4.2.3 Vowel-Stem Infinitive Shape

The vowel-stem infinitives have the following relation to their corresponding imperfects:

Imperfect : Infinitive

- ..yiiyum : ..yi- (kyiiyum A : kyiiI A melts, goes out)
 (qyidyiiyum B : qyidyi- B goes out)
- ..iiyum : ..i- (qwiiyum A : qwiI A plants, grows)
 (quriiyum B : quri- B descends)
- ..yiyum : ..yi- (hatykyiyum B : hatykyi- B it splits open)
 ..iyum : ..i- (nipsiyum B : nipsi- B causes to/ puts to sleep)
- ..yeeyum : ..yi- (qaryeeyum B : qaryi- B (sea) is rough)
 ..eeyum : ..i- (kheeyum B : khiI B falls on back/side; lies down)
 (kheeyum A : khiI A exchanges, replaces)
 (nareeyum B : nari- B gets accustomed)
- (..yeyum : ..yi- none)
 ..eyum : ..i- (thatneyum B : thatni- B visits; asks)
 (wasreyum A : wasri- A forgets)
 (nagaareyum B : nagaari- B flows)

The vocalism of the infinitive forms is predictable from that of the imperfects, but not vice versa. But why should the infinitive have a different vowel at all? It appears that again reanalysis has been involved. All vowel-stem-verb infinitives end in ..(y)i- (= ..(y)i+∅-), a high front vowel, despite the fact that the stem-final vowel elsewhere in their paradigm is ..(y)(i)i- for most, and ..(y)(e)e- for a minority of others. Again, speakers of the dialect overgeneralized and decided that the principle was that all infinitives ended in ..i- (if their corresponding imperfect did not have a palatal vowel before ..yum) or ..yi- (if their corresponding imperfect did have a palatal vowel before ..yum). The only adjustment required in any case was that of mid vowel to high--no backness or rounding was involved. The operating principle is nearly the same as the proportional analogy in the preceding section: "The height of the vowel in the infinitive is the same as that of the corresponding gerund." If we put this and the previous analogical statement together we get: "Infinitives and gerunds agree in vowel

height and palatality." This is nicely captured by Martin when he says (1970:130B), "The gerund is ... made by adding the infinitive ending -i(i) to any perfect base," e.g., yud- A + -i(i) → yudi(i) A 'calling'.

4.3 THE HISTORICAL DEVELOPMENT OF THE IMPERFECT

I briefly touched upon the imperfect in my discussion of Shodon nouns. The argument presented there is my internal-reconstruction version of arguments originally developed by Hattori Shirô in the course of work with the northern Okinawan Yonamine dialect of the Nakijin area of Nakasone Seizen, (76) and the Shuri dialect of Higa Shunchô, among others (Hattori 1959 [1932]:334-357), and in the course of work with the Shodon dialect of Kanehisa Tadashi (Hattori 1959 [1948]). A 1959 postscript to the latter article (56-61) discusses the development of the verbal suffix system of Ryukyuan, especially calling attention to the distinction between the conclusive suffixes +m and +r. These discussions are all summarized in Hattori 1977.

That the piece +yum can be segmented off as the basic imperfect suffix is already clear from the chart at the beginning of this chapter. Here I summarize the fact:

- ..C+yum
- ..V+yum

(76) Hattori seems to have been the senior partner in the development of this idea, along with Nakasone, in 1929 or 1930. It was foreshadowed in earlier work mentioned in Hattori 1959 [1932] and 1977.

The following chart shows that there is not really only one imperfect, but that in fact there are several.

- ..+yu+m 'does'
- ..+yu+n 'which does'
- ..+yu+r 'does!'
- ..+yu+s 'I thought that ... would do; ... must surely do'

A further cut is therefore possible, resulting in the suffixes +yu+ (< *+yo+ or *+yu+), +m (< *+mu(77) or *+mi), +n (< *+nu(78) or *+ni), +r (< *+ru or *+ri), and +s (< *+su).

The table presented at the beginning of this chapter oversimplified the presentation of the morpheme cuts relating to the imperfect. In fact there is a small but very important group of verbs that have an imperfect in +m (etc.), not +yum (etc.). These are the existential verbs qa+m B 'it is/exists', wu+m A '(s)he is/exists', ne+m B 'there is not', four variants of the same suffixal verb, ~+oowo+m B // ~+oo+m B // ~+o+m B // ~+aawo+m B '(politeness suffix)', and ~+nsyaawom B // ~+nsyom

(77) Tetchina, Okinoerabu island ..+mu (HUT 1959A, 1959B) shows that it is *+mu, not *+mi, but the answer is also available to internal reconstruction in Shodon; see below.

(78) Tetchina, Okinoerabu island ..+nu (HUT 1959A, 1959B) shows that it is *+nu, not *+ni, but the answer is available to internal reconstruction as well. Hattori (1960:404) shows that the ordinary yes/no question form for 'is there? (inanimate)' is qannya [B] (Hattori supplies no accent data for this example), a combination of qar B and the sentence-final question particle -na; the conclusion is that the precursor of qannya B is *qari-na B, because of the Progressive Palatalization. But if the question is 'Is it there indeed?', then the Sd sentence is qumaa-nan-du A qanna ?B ([qánná]), not the expected B x [qánná]), from qan B (the form used after the underlined particle -du--a so-called kakarimusubi construction) plus -na; despite the possibility of substituting -nya here, the conclusion is that the precursor of qanna ?B is *qanu-na ?B, with the occasional Progressive Palatalization explained as the analogical influence of the much-more-typical qannya B, which is used in the non-kakarimusubi version of the question construction.

B '(exalting suffix)'. The most direct inference from these facts is that $+yu+m$ is actually complex, and one way to line up those forms is as follows, to emphasize the missing piece $+yu+$:

```

    ..C+yu+m
    ..V+yu+m
      qa+__+m B
      wu+__+m A
    ..~+oowo+__+m B
    ..~+oo+__+m B
    ..~+o+__+m B
    ..~+aawo+__+m B
  
```

Hattori's reconstruction of imperfect \langle *infinitive + *wori/*womu depends for support on comparison with Mainland Japanese. However, I believe there is sufficient internal evidence for the reconstruction of the same sequence.

First, note that the verbs of existence par excellence, qam B and wum A, do not have the piece $+yu+$, as shown above.

In short, rather than that above, the following array would be much more revealing of verb history, assuming the knowledge of

Contraction: (79)

```

    ..C+yi-      (+yi-type consonant-stem-verb infinitive)
    ..C+ i-      (+i-type consonant-stem-verb infinitive)
    ..i+__       (i-type vowel stem)
    ..e+__       (e-type vowel stem)
      wu+m A (animate existential verb)
    ..C+y_+u+m   (imperfect of consonant-stem verb)
    ..V_y_+u+m   (imperfect of vowel-stem verb)
  
```

That is, wum A '(s)he is/exists' does not have the piece $+yu+$ because the second part of that piece, $..u..$, is, in turn, descended from the ancestor of the existential verb wum A. Further, the first part of that

(79) As pointed out in the discussion of the infinitive, aspiration here is entirely predictable on morphological grounds, and can be used as evidence neither for nor against Contraction.

piece, ..y.., is a Contracted remainder of the infinitive morpheme itself, in the case of the consonant-stem verbs (*+i+ > +y+), and an excrescent homorganic segment in the case of the vowel-stem verbs (\emptyset > y), as can be seen from the chart above.(80)

If the imperfect construction is not original, then what did it replace? It may be that it replaced another form functionally only, and that that other form still exists somewhere in the paradigm in another function. Internal reconstruction, however, cannot provide an answer.(81) It may also be that the form that it replaced has completely or partially disappeared. For example, all verbs may once have had a suffix related to the *+mu/i seen at the end of only the special subclass composed of qa- B, wu- A, ne- B, ~+oowo- B // ~+oo- B // ~+o- B // ~+aawo- B, and ~+nsyaawom B // ~+nsyom B. These are neither ordinary vowel-verb stems nor consonant stems (at least at first blush), so that it is not clear how the suffix would attach to either of those categories, but especially the latter. It is not possible to reconstruct a form that has disappeared.

(80) The present-day infinitive shape of e-stem vowel-stem verbs can be seen to be secondary, since the necessity of predictability forces us to set up two vowel-stem subtypes in pre-Sd, while only one type of free infinitive exists for both verb subtypes. The analogical nature of that infinitive was discussed in the section on infinitives. Here independent evidence is adduced, in the form of the older infinitive locked into the imperfect construction, for the pre-analogy infinitive *..e+ \emptyset - of the e-stem vowel-stem verbs.

(81) But Hattori (1977:25ff) hazards the guess that it is the infinitive form, based on comparison with other dialects.

Matsumoto (1982) has wondered if the alternate form *..im* of vowel-stem verbs with *..i(i)yum* is not a relic of an older conjugation type. But, as Martin (1970:127A) points out:

Each verb that ends in /yum/ has a variant that ends in /yim/, and the variant is more frequent for the longer verbs: *yatooyum* B or *yatooyim* B 'hires'. Verbs ending in /eyum/ optionally abbreviate the variant so that it ends in /em/: *wasreyum* A or *wasreyim* A or *wasrem* A 'forgets'." [Accent changed to LAS system.]

Apparently the simplification from *yum* to *yim* occurs only in vowel- or *r*-stem verbs. I doubt that it exists for other *..Cyum*, just as it does not in Shuri. On that assumption, we can say the following, siding with Martin.

The simple variant is totally phonologically conditioned, and is a fast-speech variant of the longer form. It is not archaic. The simplification is as follows:

..Vryum *..Vyum* *..Vyim*
..iryum *..iyum* *..iyim* *..im*
..eryum *..eyum* *..eyim* *..em*

(The non-front-vowel *..Vyim* does not simplify any further.) After all, why should only a subcategory of verbs that is easily defined according to phonological criteria be allowed not to have the progressive auxiliary construction? The "non-auxiliary" form is always predictable according to phonological criteria, and is therefore a morphophonemic simplification, not a relic of the past.

4.4 THE HISTORICAL DEVELOPMENT OF THE PERFECT

The following table recapitulates the presentation from Table 6 of this chapter regarding the perfects. All discussions of Progressive Palatalization, Voicing, Aspiration, and Consonant Cluster Simplification that follow apply as well to the gerund, and to derivatives of the perfect and gerund suffixes.

..C-		
..k-	na__+t_yam A	(nakh- A)
	kha__+t_yam B	(khak- B)
..g-	qwii__+d_yam B	(qwiig- B)
..s-	tha__+t_yam A	(thas- A)
..t-	mat__+t_yam B	(math- B)
	that__+t_yam B	(that- B)
..n-	syi__+d_yam A	(syin- A)
..m-	yu__+d__am B	(yum- B)
..b-	yu__+d__am A	(yub- A)
..r-	qu__+th__am A	(qur- A)
..V-		
..i-	qukhii__+th__am B	(qukhii- B)
..e-	wasre__+th__am B	(wasre- B)

4.4.1 Progressively Palatalized Allomorphs

In the left column below is presented the subset of forms from the above chart that have a Progressively Palatalized perfect suffix, and in the right column, those that do not:

Forms with Palatalized perfects:			Forms with non-Palatalized perfects:		
..k-	na__+t_yam A	(nakh- A)	..m-	yu__+d__am B	(yum- B)
	kha__+t_yam B	(khak- B)	..b-	yu__+d__am A	(yub- A)
..g-	qwii__+d_yam B	(qwiig- B)	..r-	qu__+th__am A	(qur- A)
..s-	tha__+t_yam A	(thas- A)	..i-	qukhii__+th__am B	(qukhii- B)
..t-	mat__+t_yam B	(math- B)	..e-	wasre__+th__am B	(wasre- B)
	that__+t_yam B	(that- B)			
..n-	syi__+d_yam A	(syin- A)			

Recall that the reason for palatality in a syllable is either (1) that that syllable is etymologically *Ci, (2) that it has undergone

Contraction, or (3) that it has undergone Progressive Palatalization. The first possibility may be rejected because the syllable is not Cyi. The second is rejected because some allomorphs of the perfect suffix are non-palatal. A reconstruction involving Contraction would require irreconcilable allomorphs, one with the sequence in it that caused Contraction, and one without it. Therefore the only possible explanation is (3) Progressive Palatalization, which involves introduction of palatality from the preceding etymological syllable. Only relatively few preceding syllables in the NSd forms actually have an etymological *i in them (e.g., in syidyam A 'died'). Therefore the syllable with etymological *i that effected the change has to have disappeared in the great majority of cases, in fact in all cases, since the root-internal vowel *i of consonant-stem verbs will be seen not to impinge directly on the affected syllable. The forms with and without Progressive Palatalization constitute members of different consonant stems, so that the final consonant of the root predicts whether or not the perfect suffix will be a Progressively Palatalized allomorph. The consonant-final stems associated with Palatalization are k-, g-, s-, t-, and n-, while those associated with lack of Palatalization are m-, b-, and r-. Whether vowel stems give rise to Palatalized alternants is determined by whether or not there is an etymologically primitive *i in the preceding syllable. This is tantamount to saying that all Progressive Palatalization had stopped occurring before the phonetic merger of yi from *i and of yi from *ye. Here are some examples:(82)

(82) The verb myi(r)- is irregular, with parts of its paradigm like an r-stem verb and parts like a vowel-stem verb.

hatykyi- B 'it splits open' : hatykyi+tham B 'it split open'
 < *fat/dikhye- B < *fat/dike- B
 myi(r)- B 'sees' : myi+thyam B 'saw'
 < *mi- B

The fact that hatykyitham B is not x hatykyithyamB shows that this is true. If Progressive Palatalization had continued as an active historical process after Raising--and Raising is what caused the merger of *i (= *yi) and *ye--then the criteria for deciding what underwent Progressive Palatalization would suddenly become morphophonemic, not phonetic. The latter choice is always preferable to the former, if no other evidence blocks it, since it relies on surface, non-abstract, criteria for sound change. Therefore I assume that no Progressive Palatalizations occurred after Raising:

- (1) Progressive Palatalization
- (2) Raising

4.4.2 Voiced-Initial-Consonant Allomorphs

Next consider perfect suffixes with voiced-initial consonant, in the left column:(83)

Forms with voiced perfects:	Forms with voiceless perfects:
..g- qwii__+d__yam B (qwiig- B)	..k- na__+t__yam A (nakh- A)
..b- yu__+d__am A (yub- A)	kha__+t__yam B (khak- B)
..n- syi__+d__yam A (syin- A)	..s- tha__+t__yam A (thas- A)
..m- yu__+d__am B (yum- B)	..t- mat__+t__yam B (math- B)
	that__+t__yam B (that- B)
	..r- qu__+th__am A (qur- A)
	..i- qukhii__+th__am B (qukhii- B)
	..e- wasre__+th__am B (wasre- B)

(83) There is no d-final conjugation equivalent to the t-final one.

Perfect suffixes with voiced initial consonants are associated with stems with voiced final consonants, but, in the other direction, one phonetically voiced stem-final consonant, r, has as its corresponding perfect suffix the voiceless-initial form +tham. However, the consonant r behaves elsewhere as if it were voiceless, to wit, in cases of initial-syllable Devoicing, where *##syir.. > ##syr.. and *##sir.. > ##sr... It is true, however, that only g and b are in voiced opposition to k (or kh) and p (or h/hw), respectively, thus forming a natural class of those voiced segments that are in phonological opposition to equivalent voiceless segments; and m and n form another natural class, namely nasals. Therefore it can be said that the voiced alternant appears after phonemically-voiced- and nasal-final stems.

Since there are perfect forms with voiceless-consonant-initial perfect-suffix allomorphs, including the vowel-stem perfect forms, it is safe to assume that the pre-Sd perfect suffix began with a voiceless consonant, and that Voicing is a feature bequeathed by the now-lost final consonant of the forms involved here.

4.4.3 Aspirated-Initial-Consonant Allomorphs

Next let us look at the allomorphs with aspirated initial consonants:

Forms with aspirated
perfect suffixes:

..r- qu_+th_ am A (qur- A)
 ..i- qukhii_+th_ am B (qukhii- B)
 ..e- wasre_+th_ am B (wasre- B)

Forms with unaspirated
perfect suffixes:

..k- na_+t_ yam A (nakh- A)
 kha_+t_ yam B (khak- B)
 ..g- qwii_+d_ yam B (qwiig- B)
 ..s- tha_+t_ yam A (thas- A)
 ..t- mat_+t_ yam B (math- B)
 that_+t_ yam B (that- B)
 ..n- syi_+d_ yam A (syin- A)
 ..m- yu_+d_ am B (yum- B)
 ..b- yu_+d_ am A (yub- A)

As noted above, the r-stem verb has a perfect with an aspirated-initial-consonant allomorph. In that regard it is just like the vowel-stem verbs. Preceding th, kh, s, or h do not Deaspirate these suffixes. All other verbs have unaspirated perfect-suffix allomorphs, regardless of whether or not they are preceded by Deaspirating consonants.

4.4.4 Allomorphs Following Another Consonant

Among the consonant verbs, only the final consonant of the t-stem verbs remains as a phonological element in the perfect, but without any aspiration. (As explained earlier, aspiration is normally missing from consonant clusters; it is always missing from the first of two consonants of a cluster.) None of the final consonants of other consonant stems surface in this environment, and the vowel verbs do not have final consonants by definition.

Forms with consonant cluster at boundary of root and suffix:

..t-	mat_+t_yam B	(math- B)
	that_+t_yam B	(that- B)

4.4.5 Reconstruction of Developments in the Perfect

Putting the above observations together, we have the following reconstructions (comments follow):

..C-				
..k-	na__+t_yam A	<	*nak+i+tamu/i A	
	kha__+t_yam B	<	*kak+i+tamu/i B	
..g-	qwii__+d_yam B	<	*oy/wig+i+tamu/i B or	
			*uy/weg+i+tamu/i B	
..s-	tha__+t_yam A	<	*tas+i+tamu/i A	
..t-	mat__+t_yam B	<	*mat+i+tamu/i B	
	that__+t_yam B	<	*tat+i+tamu/i B	
..n-	syi__+d_yam A	<	*sin+i+tamu/i A	
..m-	yu__+d__am B	<	*yo/umtu+tamu/i B	
..b-	yu__+d__am A	<	*yo/ubtu+tamu/i A	
..r-	qu__+th__am A	<	*u/ortu+tamu/i A	
..V-				
..i-	qukhii__+th__am B	<	*u/oke+__+tamu/i B	
..e-	wasre__+th__am B	<	*wasure+__+tamu/i B	

First, note that it is natural to assume that consonant-stem verbs had their stem-final consonant in their pre-perfect forms, just as in all others--that is, internal reconstruction seeks to reduce allomorphy in the reconstruction as much as possible, and nothing else prevents such a reconstruction. Furthermore, k- and s-stem perfects that have no Deaspirating consonants coming before the boundary between the stem and the perfect suffix are not aspirated, and this fact suggests that the Deaspiration occurred during a period when these forms had consonant clusters:

natyam A < *nakytyam A < *nakithyamu/i A < *nakitamu/i A
 'cried' (nakhyum A 'cries')

kyaatyam A < *kyaasytyam A < *kiy/wasithyamu/i A < *kiy/wasitamu/i A
 'extinguished' (kyaasyum A 'extinguishes')

Thus lack of aspiration where it is expected is an indication of a now-lost consonant cluster. (84)

(84) See also tiItI A/B 'one, taAtI A/B 'two', where lack of aspiration is otherwise entirely inexplicable, and where comparison with NJ hitotu 'one', hutatu 'two' shows that word-initial *fu.. (high vowel, no Progressive Palatalization) was lost. Internal reconstruction is incapable of reconstructing the place of articulation of the initial consonant, although the fact that it is voiceless and that the vowel is *u are well within reach. Note

Next, note that a vowel is interposed in the reconstruction between the root and the suffix. If the NSd gerund suffix allomorph is Palatalized, then it is assumed that the preceding vowel is *i. If it

that first-syllable vowel length is explicable either as the etymological length of the second syllable, or, possibly, as compensatory lengthening. Comparison with Sr tiici B 'one', taaci A 'two', shows that it is the latter, since Sr does not share Lengthening with Sd.

The argument presented in the main text may well turn out to be defective, if the aspiration on one piece of possible counterevidence is correct. The word qathyaA A 'tomorrow' has to have come from *qaCita A (with a mystery voiceless consonant *C), through Progressive Palatalization, since it is not possible to reconstruct a reflex that underwent Contraction. While we cannot reconstruct the voiceless consonant *C any further by internal reconstruction, it is easy to do so by the comparative method, using NJ. The NJ form is asitá 'tomorrow; morn', and so it is clear that the sequence *..sit.. in pre-Sd gave rise to two different results: ..thy.. for qathyaA A, not a verb, and ..ty.. for all s-stem verbs. One pre-Sd sequence and two NSd results require that there be some phonological conditioning, or that borrowing or analogy be involved. There does not appear to be any phonological conditioning. Nor does borrowing seem to be involved, at least not from outside of the Ryukyus; perhaps the word is a borrowing from Okinawan, in which case the aspiration would be expected (both dialects share the sound change *..sit.. > ..t(h)y.., but with the dialects of the Naha/Shuri area further changing to ..cy...), since the Okinawan form is qacya B 'tomorrow', with [tʰs], for which in Sd the nearest equivalent is [tʰh] = thy.

The other possibility is analogy, and this possibility exposes the serious weakness in the argument, namely that there really are two separate and entirely acceptable explanations for the lack of aspiration of the verbal gerunds of s- and k-stem verbs. The analogy argument goes like this: All gerunds that currently have ..Vtyam (i.e., s- and k-stem gerunds) once had the form *..Vthyam. But the result of the analogical change that led to all vowel-stem gerunds having aspirated gerund-suffix allomorphs was that it facilitated a further step in which all consonant-stem gerunds were reinterpreted as not having any aspiration.

Of course, if qathyaA A turns out to be a borrowing or a mistake, then just the reverse may turn out to be the case, namely that it was the consonant-stem gerund suffixes that were all unaspirated, for reasons given in the main text, and that the only analogy that occurred was that the vowel-stem gerund suffixes, some of which were already aspirated, were then reinterpreted as all being aspirated. At this point it is impossible to know.

is not Palatalized, then it is assumed that the preceding vowel is *u, in order to retain the distinctive feature specification [+high], and only have to vary the specification of the feature [+/-back]. Another reason for retaining strictly high vowels is that, as has already been seen for nouns and adjectives, it is etymologically high vowels that Apocope/Syncope, while other vowels are (sporadically) lost only when there is a heterosyllabic sequence of like vowels. Thus I am suggesting that Syncope here has been followed by Consonant Cluster Simplification. But this is not the same Syncope as discussed in the earlier chapters. Since this Syncope predates Consonant Cluster Simplification, and since the latter in turn (1) must occur before the second (Apocope/)Syncope (which leads to non-Simplified consonant clusters), and also (2) feeds into other sound changes, such as Lengthening-1 in second syllables (which in turn predates the Apocope/Syncope that has been discussed previously), it follows that Syncope (henceforth Syncope-1) in gerunds is separate and earlier, and that it and (Apocope/)Syncope cannot be considered to be the same sound change. Furthermore, the gerunds of t-stem verbs are apparently not the result of Syncope-1, but rather of Apocope/Syncope (henceforth Apocope/Syncope-2 or Syncope-2), since they retain a (geminate) consonant cluster.(85)

(85) There is a possible alternative: Since the loss of *i in the sequence *..tit.. would have led to ..tty.. (= [tt]), which is apparently the only geminate sequence that might have resulted from Syncope-1, it might be that the Consonant Cluster Simplification sound change allowed geminate sequences not to Simplify, but Simplified only heterogeneous consonant clusters. This approach seems inherently unsatisfactory, however, since my intuition is that homogeneous clusters should simplify before heterogeneous

It was seen earlier that the infinitive had the allomorphs $*+i-$ and $*+\emptyset-$, the first in the case of the consonant stems, the second in the case of the vowel stems. Here in the reconstructed perfect, there appears to be a suffix with three allomorphs, $*+i-$, $*+u-$, and $*+\emptyset-$. The distribution is very similar, except that the two non-zero allomorphs share the C-stem domain. Since the environment in which $*+u-$ occurs is easily defined phonologically, we may suppose that it backed from $*+i-$, and that in fact the form is actually composed of the infinitive (since infinitive allomorphy is so unusual) plus a second verb (formally), just as there are compound verbs in Modern Shodon dialect that have an infinitive as their first member (hakyii#dyasyum B 'spits' (HUT 1959B)). Furthermore the second half of the verb compound appears to be a vowel stem, if we look at the gerund, which is reconstructed as $*+te$ (i.e., $*\#te+\emptyset-$, the pre-Sd infinitive of that verb) as opposed to $*+tamu$.

Thus $*+tamu$ itself is likely to be a compound, and since the piece $*..amu$ is the part that differs from the rest, it is straightforward to assume $*+t+tamu$, with the $*e$ of $*+te$ elided. This, too, is a compound, of $*V\#te+\emptyset-$, the infinitive of the verbal gerund compound, followed by $*amu$, which must be $*amu$ B 'it is/exists'. Since $*+te-$ carries the sense of $*'(past)'$ and non-finiteness, it is a lot like a past participle; thus the original meaning of $*+t+tamu$ may have been something like $*'is done'$.

ones, if there is to be a difference in timing at all.

Note also that the gerund serves as the anchor for both the yes/no and "wh-" question constructions, but with vowel length and accent effacement (\sim +thii B / \sim +thyii B / \sim +dii B / \sim +dyii B), so that something again has been added, although just what that something is is not as clear this time: $*\#te\sim$ +e B or $*\#te\sim$ + : B (with abstract length being the question marker).(86)

4.5 VERBS WITH IMPERFECTS IN + $\emptyset\emptyset$ +M

Just as the paradigm quRyum A : qurI A : quroo B : quthi- A 'sells' is analyzable as being that of an r-stem verb qur+ A, so it seems that similar verbs, the first syllable of which never lengthens, and the stem of which is in any case no longer than CVC-, have to be CVC-, not CV-, because there is no CV- / CVV- alternation, which is to say, the verbs are not monosyllabic vowel-stem verbs. In other words, the verb infinitives qaryi- B 'its existing/being' and wuryi- A 'his/her existing/being', because they do not have x qaa.. and x wuu.., respectively, have to be treated as being indicative of a subtype of r-stem verb. The infinitives in ..ryi- may be assumed to be ..rtyi-, to fit into what is already known about the other paradigms--no vowel-verb paradigms have an infinitive in ..tryi (nor do any others).

If qam B and wum A are r-stem verbs, then why is it that they have the imperfect ending + $\emptyset\emptyset$ +m instead of the +yu+m (< *ti#wo/u+mu/i) that the other r-stem verbs have? As has already been pointed out, these are verbs of existence, and therefore it should not be surprising that they

(86) Shuri +yi, a yes/no question suffix attachable to nouns and verbs alike, shows that it is not the latter.

do not have existential auxiliaries (Hattori(87) 1959 [1932]:334-357).

Therefore the discussion can focus on how it may be that an r-stem verb came to have the +~~oo~~+m imperfect suffix in the first place.

(87) Martin (1970:129B-130A, 137B), however, points out that there is wuRyum A 'stays', and that it shares the polite wuryoowom B (= wur+yi A + ~+oowom B) and exalting qumooRyum B (a suppletive verb) with wum A '(s)he is/exists'. Martin's implication is that wum A is somehow derived from wuryum A, but the argument lacks force, because it does not solve the problem of the allomorphy of the imperfect suffixes +yum and +m, and in so doing ignores the fact that the verbs that lack the piece ..yu.. are precisely the existential verbs. (While ~+o(o(wo))m B is not a free-standing verb, note that it replaces wum B in its auxiliary function: +y+u+m~ = ~+y+oowo+m B. Thus +u+~ is equivalent to ~+oowo+ B.

We can see that wuryoowom B 'is; stays' has two meanings, depending on context, and that a different non-polite verb is equivalent for each meaning. Such a state of affairs can have resulted from the split of wum A from wuRyum A, or it can be that it resulted from the split of wuRyum A from wum A. Martin favors the former, but I favor the latter for the reason that it preserves the Hattori hypothesis, and in addition it flows naturally from the function of the polite auxiliary both as an auxiliary showing politeness, and as an auxiliary which is in the same slot as wum A when used in its auxiliary sense. There was a proportional analogy:

Y+yooowom : Y+yum :: wur+yooowom : wur+X, where X = +yum.

(A form with +yooowom is to a form with +yum as wur+yooowom is to wur+X; X is wur+yum.)

Thus one submeaning of wuryoowom B, namely 'stays', was semantically calved off into its own separate non-polite word--it had lost its original semantic force, and suffered the formal consequences by being remodeled as a non-existential verb. Note that no analogy to wum A from wuRyum A is possible, however. An analogical argument would have to be constructed to get all verbs with simple +m to appear out of nowhere, and if at least one of them did not pre-exist in the first place, that would be very difficult indeed. In any case, when wuRyum A is reduced to its ultimate constituents, it is *wo/ur+i#wo/u+mu A, and we are right back to having to explain the origin of the second constituent of the compound.

4.5.1 The Reflexes of Pre-Sd *mu and *nu in Shodon Dialect

Hattori (1977:23f) discusses the possibility that words ending in *mu in Shodon dialect, and with type B accentuation, are different from words ending in *mi and with the same accentuation. He hypothesizes that words with final *.mu B yielded modern ..m B, such as qam B 'it is/exists', and that words with *.mi B yielded ..myiI B. (I have converted Hattori's orthography to my own.) Hattori's examples of words in ..myiI B are as follows, bolstered by examples from Martin 1970:

Shodon word	Gloss	Hattori	Martin
gumyiI B	'dust'	-	+
khamyiI B	'deity'	+	-
kyimyiI B	'millet'	-	+
myimyiI B	'ear'	+	+
namyiI B	'wave'	+	+
numyiI B	'flea'	+	+
qamyiI B	'net'	+	-
qumyiI B	'pus'	+	-
qumyiI B	'sea'	+	+
simyiI B	'ink; charcoal'	-	+
timyiI B	'sin'	-	+
yumyiI B	'bow (for archery)'	+	-

Hattori's argument might appear at first glance to be weak, since Martin's data show that *CVCu B normally goes to CVCu(u) B, not x CVC(u) B:

bukuU B 'bubble' < *bu/oku B
 khadiI B 'number' < *kaz/du B (cf. recent borrowing khazuU B '[id.]')
 wakuU B 'frame' < *waku B (cf. wakU A '[id.]')

But it is certainly true enough that for *.nu B and *.mu B no instance can be found of expansive-dissyllable ..nuU B or ..muU B.(88) On top of it all, there are a very few non-loans that have apocopating-dissyllable ..nU B (although there are none with ..mU B):

(88) See below for more on ..muU B.

byinU B 'rouge' (// byinyiI B 'id.')

kyinU B 'clothing' (cf. the loan kyinuU B 'silk')

munU B 'thing' (cf. ..#munU~ in compounds)

qyinU B 'dog' (qyinuu#.. B as first element in compounds)

wunU B 'pickaxe' (cf. nataawunU B 'small axe')

However, two words stand directly in the way of Hattori's hypothesis:

kyinuU B 'silk' (cf. kyinU B 'clothing')

qamuU B 'old woman'

The first of these words has already been identified as a loan above. NJ k'ínu 'silk' has narrowed in meaning from OJ k'ínu 'clothing; silk', while Sd kyinU B has retained the other, primary, meaning. The NJ word has been borrowed into Shodon in the meaning 'silk', now competing with the older Sd qyithyuU B '[id.]'. Both OJ ito(89) and NJ ito mean 'thread', so the Sd form has to have developed on its own. The form kyinuU B 'silk', then, is clearly a borrowing. The other form, qamuU B, is not so clear, at least not from the point of view of internal reconstruction. It might be either *amu B, which would be fatal to Hattori's hypothesis, since it would require *amu B 'old woman', 'it is/exists' to split for no apparent reason, or *amo B, which allows the hypothesis clear sailing, since NSd qam B 'it is/exists' and qamuU B 'old woman' would be from different sources, *amu B and *amo B, respectively. The weight of the discussion so far seems to favor *amo B, and it would certainly be acceptable to opt for it in the absence of clear counterevidence (actually none is possible, since the sequence ..mu(..), is always ambiguous between *..mu(..) and *..mo(..)); but the

(89) Whether OJ ito has kô or otsu to (i.e., t'o or t"o) is not clear from texts (JDB:85B-C).

comparative method does clearly point to *amo, since OJ has eastern dialectal *amo(90) 'mother' (JDB:49C), for central OJ omo 'mother; nursemaid' (JDB:164C).

We may accordingly set up the part of the Lengthening-1 sound change that deals with high back vowels as follows:

All *u in second-syllable position in two-syllable atonic (= B) words changes to ..uU, except for that which is preceded by a nasal.

This means that *..nu#(##) B and *..mu#(##) B will Apocopate, regardless of the length of the word in which they are found. No special mention need be made of *nu or *mu in any other environment; those work like any other *Cu syllables in their respective environments.

Hattori appealed to comparison with Japanese in his hypothesis, since the only Shodon evidence that he considered was qam B and the ..myiI B noun list. No such appeal is required, however, as can be seen from the additional evidence discussed above, and from the fact that qamuU B 'mother' can be assumed to be *amo B.

The pre-form *amu B 'it is/exists', therefore, was not required to become x qamuu B, and is regular. The pre-form *wo/umu A, of course, would never have become x wumuu A in the first place, since it is tonic. The form wum A is exactly what is expected from the earlier discussion of tonic dissyllabic nouns with final etymological high vowels.

Most important of all, it is now clear that, if a word (1) is etymologically dissyllabic, (2) ends in ..m or ..n, and (3) is accentually B, its final vowel was *..u and not *..i. Thus it is

(90) No distinction between kô and otsu is made for the syllable mo, except in the Kojiki, in which this word does not appear.

possible to dispense with the ambivalent reconstruction $*..+mu/i$ for this suffix; the form was $*..+mu$.

It is well to keep in mind that no nouns ending in $..mU$ B have been found.(91) Among the verbals, there are only qam B 'it is/exists, there is', nem B 'there is not', $\sim to(o(wo))m$ B '(polite suffix), and $\sim +nsyom$ B, and the latter two are not etymologically dissyllabic. Otherwise we are limited to the enclitic $-m$ 'also, too', which, because it is an enclitic and not part of the noun proper, is never allowed to have a long-vowel variant when attached to a monosyllabic noun of B accent type: $hwa-m$ B 'tooth, too', not $x hwa-muu$ B (if $< *fa-mu$ B), and certainly not $x hwa-myii$ B (if $< *fa-mi$ B). Compare $hwaa-nu$ B 'tooth (subject)' ($< *fa-no$ B), not $x hwa-nuu$ B. Thus it is clear that the shape $-m$ of the enclitic is not an effect of whatever force led to the Hattori hypothesis, since monosyllabic enclitics without initial m are subject to the same shape constraints (cf. $-nYI$ 'to', as well). It cannot, in fact, be a cause, either. One might think that the constant word-final appearance of the enclitic $*-mu // *-m$ (92) during the period

(91) There are relatively few nouns ending in $..mu$ (or $..bu$) in OJ in any case, and the general Sd correspondence is $..mo0$. See a discussion relating these distributions to the $k\hat{o} / otsu$ distinction of OJ in Hattori 1959 [1948]:58-61. Since Hattori would like to see the forms with $..mo0$ as being originally $*..m'o$ ($k\hat{o}$ -type mo), it stands to reason that $qamuU$ B will have to be $*am''o$ B with $otsu$ -type mo .

(92) Note that the assumed reconstruction here is $*-mu$, not $*-mi$. If the enclitic were treated as an integral part of the word, and therefore capable of lengthening, then two views are possible: (1) Assuming the Hattori hypothesis, $*fa-mu$ B would yield the reflex $hwa-m$ B (exactly as in actual NSd), while $*fa-mi$ B would yield $x hwa-myii$ B; (2) Assuming across-the-board Lengthening-1, both forms would have long vowels: $x hwa-muu$ B and $x hwa-myii$ B.

when Apocope-2 was in progress, regardless of whether a word was accented A or B, had something to do with the fact that $..muU$ is missing from verb forms. It would have been an analogical effect from the frequent examples of enclitic $*-mu // *-m$, and the complete lack of dissyllabic noun-final $*..mu B // *..muu B$, and such a misapprehension would have carried over to the verbs, yielding $..m B$, not $x ..muu B$. It would also be seen as having carried over to the verbs for $*+mu$, which is not an enclitic but a suffix, and also as having been applied to nouns as a phenomenon that included atonic dissyllables in $*..nu$, to explain the $..nU B$ forms listed above.(93) Such an explanation seems good enough at first glance, but it in fact seems somewhat unlikely on closer inspection. The free alternation $*-mu // *-m$ during the period that Apocope-2 was taking place happened after $..muu$ would have already formed by Lengthening-1 or Length Shift (depending on which actually occurred). It seems unlikely that an Apocope-2 would have analogically influenced an already-formed final long vowel and caused it to completely disappear. Thus it would seem that there must have been an earlier Apocope-1 (not Syncope-1) just for $*..nu B$ and $*..mu B$ in second syllables.(94) But a counter-hypothesis even more dangerous to Hattori's hypothesis presents itself. That is that all forms of the imperfect of $qa-$ B have been shortened by analogy to $wum A$ itself, since the two words are so closely linked in meaning and function. After all, not

(93) Recall that an alternative explanation is explored in the noun chapter.

(94) The fact that there is a great deal of N in Shuri dialect from $*nu$ and $*mu$, but not $*Cu$ or $*Ci$ apocope in general, lends some credence to this view.

only is it necessary to explain the Apocopated ..m and ..n of qam B, but in addition the Apocopated ..r and ..s. One tack is the one mentioned immediately above, namely analogy with wum A. The other is to claim that the forms with ..r and ..s simply changed over by analogy from their long versions *qaruu B or *qaryii B to Apocopated versions, in order to agree with qam B and qan B, which had formed according to the aforementioned Apocope-1. At this point it seems impossible to decide.

4.5.2 Provenance of Verbs with Imperfects in +~~oo~~+m

Now let us examine the morphology of wum A, qam B, and nem B.(95)

wum A	qam B	nem B
wun A	qan B	nen B
wur A	qar B	(net B)
wus A	qas B	nes B

The reconstruction of the conclusive suffix is *+mu, that of the attributive suffix, *+nu, that of the +r suffix, *+ru/i, and that of +s, *+su, so the verb paradigms once looked like this:

*wo/ur+mu	A	*qar+mu	B	*n er +mu	B
*wo/ur+nu	A	*qar+nu	B	*n er +nu	B
*wo/ur+ru/i	A	*qar+ru/i	B	(*n er +d/zu)	B
*wo/ur+su	A	*qar+su	B	*n er +su	B

(95) Martin 1970 gives wus as an allomorph of wur before sa, and this is surely correct as far as it goes, but Hattori (1960:402ff) has a sentence-final -s for both verbals and the verbalization of the adjectival, as well as for ne- B. (For the forms of neE- B, see Hattori 1960:408-409.) This same -s is also used before Sd ga, roughly equivalent to the phrase-final ga of NJ, and seen widely as a reflex of proto-Ryukyuan *-su in other parts of the Ryukyus. The Sd meaning of -s is approximately 'I tell you that it is indeed so'. It is apparently an abstract noun in origin.

These are all *CVCCV. But so far there has been no need to reconstruct *CC sequences for pre-Shodon, and it has been seen that in the case of the gerund the morphophonemics were very similar to later Syncopations and Progressive Palatalizations, suggesting that such processes had happened more than once in this dialect. The same line of argument can be applied here, yielding *CVCI+CI sequences:

*wo/uru/i+mu	A	*qaru/i+mu	B	*n̄eru/i+mu	B
*wo/uru/i+nu	A	*qaru/i+nu	B	*n̄eru/i+nu	B
*wo/uru/i+ru/i	A	*qaru/i+ru/i	B	(*n̄eru/i+d/zu)	B
*wo/uru/i+su	A	*qaru/i+su	B	*n̄eru/i+su	B

And, since the stem ends in a consonant, it may be assumed that one further morpheme boundary is insertable, making the paradigms:

*wo/ur+u/i+mu	A	*qar+u/i+mu	B	*n̄er+u/i+mu	B
*wo/ur+u/i+nu	A	*qar+u/i+nu	B	*n̄er+u/i+nu	B
*wo/ur+u/i+ru/i	A	*qar+u/i+ru/i	B	*n̄er+u/i+ru/i	B
*wo/ur+u/i+su	A	*qar+u/i+su	B	*n̄er+u/i+su	B

If it is *+it, then this may be the infinitive ending; otherwise, we simply do not know, using only the evidence available within Shodon dialect, that is to say, using only internal reconstruction. The sound change is:

WRITTEN AS ONE CHANGE:
ru or ri > ∅ / ___+C

WRITTEN AS TWO CHANGES:
(1) u or i > ∅ / r___+C
(2) r > ∅ / ___+C

Note the parallel between the gerund and the imperfect:

*wo/ur+u/i+mu A = *CVC+I+CV > *CVCCV = *wo/urmu A > *wo/umu A = *CVCI
*wo/ur+ u +te A = *CVC+I+CV > *CVCCV = *wo/urte A > *wo/ute A = *CVCE

> CVC = wum A
> CVCV- = wuthi- A

The reason the forms came out differently in modern Shodon dialect was that the form with **+mu* ended with a high vowel, allowing the word to undergo Apocope-2 once the consonant cluster simplification occurred. The reconstruction here requires that the sound changes leading to the original imperfect of the r-stem verbs have occurred before any second-syllable lengthening. (Cf. *khagyiIrYI* A 'limit' < **kagiri* A, *qakuUBYI* B 'yawn' < **akubi* B, both **CVCICI*.) Thus it requires that second syllables not have been long originally, dealing a blow to the hypothesis that "Lengthening-1" was always on the second syllable as original vowel length (x **akuubi*). It is still possible, however, for original length in words with NSd B-type accent to have been on the first syllable, and to have Shifted over to the second syllable only after the sound changes discussed here had been completed (**aakubi* > **akuubi*). The sound changes thus had the following sequence:

	Sync-1, CCS	Lengthening (or Length Shift)	Raising, Ap-2, ...
<i>*kagiri</i> A 'limit'		<i>*kagiiri</i> A	<i>khagyiIrYI</i> A
<i>*akubi</i> B 'yawn'		<i>*akuubi</i> B	<i>qakuUBYI</i> B
<i>*wo/ur+u/i+mu</i> A '(s)he is'	<i>*wo/umu</i> A		<i>wum</i> A
<i>*ar+u/i+mu</i> B 'it is'	<i>*amu</i> B		<i>qam</i> B

Applying this reconstruction to the complex imperfect *+yu+u*, we see that what underlies it is the progressive form **..+i#wo/ur+u/i+mu* for consonant-stem verbs (with the infinitive suffix **+i-* starting things off), and **(..e+∅)#wo/ur+u/i+mu* or **(..e+∅)#wo/ur+u/i+mu* for the vowel-stem verbs, with the stem-final front vowel of the verb followed by the zero suffix of the infinitive.

4.6 VERB-CLASSIFICATION REALIGNMENTS: VOWEL STEM AND R-STEM VERBS

Above it was mentioned that Matsumoto (1982) has vowel verbs as well as consonant verbs appearing with ..Ryum, whereas Martin's set of data does not have ..Ryum for vowel verbs. There must have been a reanalysis of ..(y)(i)iyum to ..(y)(i)iRyum and of ..(y)(e)eyum to ..(y)(e)eRyum, driven by the already heavily overlapping formal identities of the two verb classes. These overlapping identities can be schematized as follows:

Vowel-stems			Overlap	r-stems		
! Inf: (..i)+0 (<- ..i/..e)	!	! Inf: +i- / [-pal] r_____!	!	! Inf: +yi- / [+pal] r_____!	!	!
! (..yi)+0 (<- ..yi/..ye)	!	! <--- Analogy-1	!	! Inf. vocalism in i/yi	!	! <--- Analogy-2
! ..V+th..	! <---	! ..Vth..	!	! ..V_+t(?h)..	!	!
! ..+roo	! <---	! ..roo	!	! ..r+oo	!	!
! ..V+yum	! <---	! ..Ryum	!	! ..r+yum	!	!
!	!	!	!	!	!	!

The infinitives are different in their linguistic structure, but they have crept closer together in surface shape because of separate analogies in the vowel-stem and consonant-stem verbs (see the first three lines of the chart above). In addition, the form of the gerunds has come closer together, probably through analogy; the different segmentation of the tentative (and the negative) is not evident on the surface; and the imperfects have grown together, though ultimately their source is the infinitive, which is different in the two conjugations.

If *..Ryum* is possible for vowel verbs, one may well ask if it is possible for vowel verbs to become consonant verbs simply by the reanalysis of the infinitive from *..(y)(i)i+∅* to *..(y)(i)ir+i-* and from *..(y)(e)e+∅* to *..(y)(e)er+i-*; none of the other forms differs between the two conjugations. The analogy would have been as follows, if the two analogies discussed above are telescoped:

..ram [Neg. or Tent.] : *..Ryum* : *..ri-* =
..ram [Neg. or Tent.] : X : Y
 X = *..Ryum* (<- *..*'yum*)
 Y = *..ri-* (<- *..∅)
 (*..ram* is to *..Ryum* and *..ri-* as *..ram* is to X and Y;
 X is *..Ryum* (reanalyzed from the syllable *..*'yum*),
 and Y is *..ri-* (reanalyzed from *..∅).)

After all, it is striking that, with consonant-stem verbs other than r-stem verbs, there are very few roots whose final vowel is a front vowel, while all vowel-stem verbs have an etymological front stem-final vowel. Only in the case of r-stem verbs is there a very large proportion of verbs with *..(y)(i)ir-* or *..(y)(e)er-* root-finally. It seems at least likely that most of these verbs were once vowel verbs, and that they shifted category simply through the reanalysis of the infinitive.

The number of verbs with *..(y)(i)ir-* or *..(y)(e)er-* stems is 16, compared to 41 other r-stems, for a total of 57 r-stems. The ratio of back to front vowels is 2.6:1, and front vowels are 28 percent of the total. The number of non-r-stems with preceding front vowels is 6, compared to 48 other non-r C-stems. The ratio of back to front vowels is 8:1, and front vowels number 11 percent of the total. The ratio of percentages is 2.5:1, showing that *..(y)(i)ir-* and *..(y)(e)er-* stems

make up 2.5 times as many of their class as do any other $..(y)(i)iC-$ or $..(y)(e)eC-$ stems. Of course, all vowel-stem verbs end in $..(y)(i)i-$ or $..(y)(e)e-$, for a total of 41. The proportional differences between the r-stem and other C-stem verbs suggest that around 10 verbs have been reanalyzed from vowel stems to consonant stems. Thus the total number of r-stem verbs was perhaps originally around 47, and of vowel stems, perhaps around 51. The following lists present the data on which the consonant-verb counts were based.

 $..r-$:

- (1) beer- B barks
- (2) hweer- A / weheer- A opens it
- (3) khusyRyum A rubs (HUT 1959B)
- (4) kyir- B cuts it
- (5) kyir- A wears
- (6) nyir- A cooks
- (7) nyir- A resembles
- (8) qahweer- A grows stale
- (9) qyikr- B (HUT 1959B) lives
(cf. qyiktyum B (HUT 1959B) is alive)
- (10) qyir- A enters
- (11) qyir- A needs
- (12) sikr- B exceeds
(cf. siktyam B exceeded, sikryi- B)
- (13) syabeer- B chatters, talks
- (14) syIr- B (HUT 1959B) finds out
- (15) thateer- A sets it up
- (16) yeer- B gets thin

RATIO: 41:16 (= 2.6:1; total number: 57)

PERCENT: 28

 $..C-$:

- (1) hyik- A' // hyk- A pulls
- (2) khyik- A' // khyk- A hears
- (3) qwiig- B swims
- (4) qyik- A goes (non-perfect allomorph)
- (5) *qyin- A goes (perfect suppletive allomorph in qyidyam A 'went')
- (6) syin- A (SdELex) // A' (HUT 1959B) dies

RATIO: 48:6 (= 8:1; total number: 54)

PERCENT: 11

RATIO OF PERCENTAGES OF TWO COLUMNS: 28:11 (2.5:1)

In the above tallies I have not included *myi(r)- B*, which exhibits complete ambivalence as to class membership because of its infinitive, of which it has two free variants, *myiI B* and *myiri- B*, the first a vowel-stem-type infinitive, the second a consonant-stem type. The very fact of the existence of such a verb reinforces the hypothesis about category-jumping, since it has, in effect, been caught in the act.

Another verb not included is *qyiyum B*, which, in all of its paradigm except the imperfect, acts like an r-stem verb: *qyiryi- B*, etc. But *Koniya*, a dialect closely related to *Shodon*, has it as an r-stem throughout, as do other dialects of *Amami* (HUT 1959B). In any case, it has been left out of the tally.

Another verb form that I am unsure of is *yithyum A'* 'is seated' (HUT 1959B), an NSd present progressive, equivalent to *yithyi- A'* 'sitting' + *wum A* 'is'. I believe the form is equivalent to an imperfect *yiRyum A'*, infinitive *yiryi- A'*, especially because of its strange accent, which I have seen so far only in C-stems, but lingering doubts remain, so I have not included it in the tally.

Finally, the verb stem *syidiim- A* 'sinks, drowns' deserves special mention. As is explained below, the form CVCVVC- for *CVCIC- verbs is anomalous, so this verb is immediately suspect as not being an original *CVCIC- verb. And in fact some other evidence can be gleaned to support that suspicion. There is a sporadic (so far as I know) sound change:

*(")syu(u) > Cyi(i)
 (*syu, *syuu, *dyu, or *dyuu change (sporadically) to the equivalent consonant plus ..i or ..ii.)

that affects only a few words in Shodon, and its effects are known largely by comparison with other dialects or with Japanese. Words affected by this sound change include:

syidoOnU B 'Shodon' (Martin 1970:97A; cf. Naha syuduN)
 ..#syimoOtI~ '..#book' (SJ; cf. NJ syómotu)

Thus we suspect that before this sound change syidiim- A was *syidyuum- A, and so it would not have been a member of the set of *..iC- verbs investigated above. Compare *syidyuum- A to qyidyUmYI B 'fountain'. They both exhibit signs of Progressive Palatalization:

*syidyuum- A < *siz/dom- A (but cf. NJ sizum-^)
 qyidyUmYI B < *iz/domi B (but cf. NJ ízumi^)

Recall that Progressive Palatalization cannot affect a following *Cu syllable. Thus the syllables must have had *o, which is unexpected. These may well turn out to be cases of vowel lowering, discussed in the last chapter, but for the verb the mechanism is not clear. For now, the reconstructions have to be allowed to stand as they are, and remain objects of future research.

4.7 TWO-CONSONANT C-STEM VERBS

There is a set of seven C-stem verbs that I call "two-consonant" verbs for the sake of convenience, since the stem ends in two consonants in most of its forms. The sequence of sound changes that they point to, and the analogical changes in which they take part, make them an important subcategory. I discuss the three subclasses below.

4.7.1 The Verbs qakkyum B and qudukkyum B

There is a subset of k-stem verbs that have an interesting root-internal alternation between k and t. They are:(96)

Impf.	qakkyum B 'walks'	=	qakk+ <u>tyum</u> B 'walks'
Perf.	qattyam		qat \emptyset + <u>tyam</u>
Inf.	qakkyi-		qakk+ <u>tyi-</u>
Tent.	qakkyoo (Martin 1970:104A)		qakk+ <u>yoo</u> (Martin 1970:104A)
Impf.	qudukkyum B 'is surprised'	=	qudukk+ <u>tyum</u> B 'is surprised'
Perf.	quduttyam		qudut \emptyset + <u>tyam</u>
Inf.	qudukkyi-		qudukk+ <u>tyi-</u>
Tent.	qudukkoo		qudukk+ <u>oo</u>

Each set has the same allomorphy: kk / \emptyset t (ignoring palatality). All else being equal, the regular disappearance of stem-final *k before the perfect suffix (and all other *t-initial suffixes) should have left the sequence x *kty:

*..kkty.. > *..kty..
 123 13

The actual form, of course, is ..tty.., not x ..kty... Let us suspend judgment on the identity of the alternating "*k" for the moment. The above is a compressed view of what should have happened. First of all, it has already been surmised on independent grounds that there was an earlier Syncope-1 followed by Consonant Cluster Simplification, and that only then did the Syncope-2 discussed in the noun chapter occur:

*..CIkit.. > *..CIkity.. > *..CIkty.. > *..CIty.. > *..Cty.. > ..tty..

The sequence ..kty.. should not assimilate; cf. qyiktyam B 'lived', with no assimilation.(97) Therefore there must have been some consonant other

(96) Martin (p.c.) elicited qakkyoo B while looking for kyo syllables, so this form is quite secure.

(97) This verb and one other of the same type are discussed at greater length below.

than *k, one capable not only of assimilating to *t, but also to *k, since it is now clear that it cannot have been *k itself. It was seen in the adjective chapter that qyikkyā- B 'short' was likely to be from *irika- B, and it may well be that these two verbs also have *..rk...(98) Furthermore, each appears to have a different etymological vowel between the *r and *k:

*arik- B (cf. qakkyoo B)

*o/udoro/uk-(99)

B (cf. qudukkoo B)

The *i of *arik- B caused the Progressive Palatalization of the tentative form:

*arikhoo B

*arikhyoo B (Progressive Palatalization)

*qarkyoo B (Syncope-2, phonologization of *[q] to */q/,
Aspiration Suppression)

*qakkyoo B (Assimilation of *r to *k)

*qakkyoo B (Raising)

(98) The sequence qyiktyam B itself is from a complex sequence, but the claim above about *k being impossible is still true, as can be seen by inspecting the sequence of sound changes below, with both the *..rik.. and *..kik.. candidate forms:

(1)	*ikirityamu B	*arikityamu B	*akikityamu B
(2)	*ikirtyamu B	*ariktyamu B	*akiktyamu B
(3)	*ikityamu B	*arityamu B	*akityamu B
(4)	*iktyamu B	*artyamu B	x *aktyamu B
(5)	*iktyamu B	*attyamu B	x *aktyamu B

As soon as the sequence reaches the fourth line, the *aktyamu B hypothesis is doomed, because its sequence *..kty.. merges with the identical sequence of *iktyamu B, which does not change to x ..tty.., as pointed out above.

(99) The sequence ..du.. can only have come from *do, since *du went to di in NSd, merging phonemically with di from *de (although alternations such as dI and diI in appropriate environments can still disambiguate them).

The lack of *i pre-finally in *o/udoro/uk- B kept its own tentative form from Palatalizing: qudukkoo B. The vowel lost at the coalescence of *.rk.. may have been *u (the normal case), or it may have been *o (Homorganic Vowel Drop, first discussed in the noun chapter [thus *udorok- B or *odorok- B]).

Note that, despite lack of an aspiration-suppressing kh, th, s, or h before the final k of the root, aspiration is nonetheless suppressed. This is because formation of a consonant cluster automatically suppresses aspiration. This aspiration suppression is true throughout the paradigm, since there are consonant clusters throughout, showing that consonant-cluster aspiration suppression overrides even the analogically-inserted aspiration of verbal imperfects where it would be expected (as in mathyum B 'waits')--both these verbs would have it if they had not had consonant clusters blocking it.

4.7.2 The Verbs qyikRyum B and sikRyum B

In the last section, verbs with stem-final ..kk- (i.e., a subtype of k-stem) were discussed. Here the stems in question end in ..kr-, and are a subtype of r-stem (r-3'). It can be seen from the infinitive that these are r-stems, since no infinitive allomorph x +ryi exists; thus the segmentation is ..r+yi-. The paradigms are as follows:

Impf.	qyikRyum B	sikRyum B
Perf.	qyiktyam	siktyam
Inf.	qyikryi-	sikryi-
Tent.	qyikryoo	sikryoo

It is clear that, for the perfect, the sequence was Progressive Palatalization, Syncope-1, Consonant Cluster Simplification, and

Apocope/Syncope-2: (100)

*ikirithamu B	*sug/kiritamu B	
*ikirithyamu B	*sug/kirityamu B	(Progressive Palatalization)
*ikirtyamu B	*sug/kirtyamu B	(Syncope-1)
*ikit(?h)yamu B	*sug/kityamu B	(Consonant Cluster Simplification)
qyiktyam B	siktyam B	(Apocope/Syncope-2; *su > si; Q-Phonologization)

For the tentative, the sequence produced the following changes:

*ikir $\text{\textcircled{9}}$ B	*sug/kir $\text{\textcircled{9}}$ B	
*ikiry $\text{\textcircled{9}}$ B	*sug/kiry $\text{\textcircled{9}}$ B	(Progressive Palatalization)
*qikry $\text{\textcircled{9}}$ B	*sikry $\text{\textcircled{9}}$ B	(Syncope-2; *su > si; Q-Phonologization)
qyikryoo B	sikryoo B	(Raising)

Whether these two verbs were r-stems in pre-Sd is brought into question by two words related to qyikRyum B: qyikmunU B 'animal' and qyikyil B 'breath' (both HUT 1959B). I will assume that 'lives', 'animal' ('living' = qyik- B + 'thing' = +munU~), and 'breath' are all closely enough related to be from the same source, *iki(-) B *'life, breath'. Thus it is possible for the verb stem to have been either *iki- B or *iki+r- B, with an *+r- extension. But recall that it was hypothesized that some *+r- was added analogically. Thus it is possible that these verbs were once vowel stems.

(100) As for the change *su > *si in the chart, all that can be said of it is that it must precede the Raising of mid to high vowels, since otherwise *so and *su would merge, and that certainly does not happen. The sound change is stated as *su > *si, but it is of course more general, encompassing *t, *d, *s, and *z plus *u.

4.7.3 The Verbs nusmyum B, musbyum A, and qappyum A

This set of three verbs is subcategorized in turn into two sets: (1) nusmyum B 'steals' and musbyum A 'ties', and (2) qappyum A 'plays'.

4.7.3.1 The First Subset

Consider the verbs nusmyum B 'steals' and musbyum A 'ties' (the latter HUT 1959B):

nusmyum B 'steals'	=	nusmyum B
nusdam		nusØdam
nusmyi-		nusmyi-
nusmoo		nusmoo
musbyum A 'ties'	=	musbyum A
musdam		musØdam
musbi-		musbi-
musboo		musboo

Again the sequence of changes is as before, with Syncope-1 occurring before (Apocope/)Syncope-2, and Consonant Cluster Simplification in between. There is no Progressive Palatalization with m- and b-stem verbs, and the b-stem infinitive reanalysis has occurred unimpeded. The pre-Sd stems are *nu/osum- B and *mu/osub- A. Neither nusmyi B nor musbi A should be capable of alternating with another allomorph, because they have the shape CVCCV, a shape that is quite stable among the nouns. More will be said about this shape of the infinitives of two-consonant verbs shortly.

4.7.3.2 The Single-Member Subset qappyum A

The verb qappyum A 'plays' is the inhabitant of a class of verbs of which it is the only member, a p-stem. But this "p-stem" has variants

that link it to the b-stems, and indeed it must once have been very similar to the verb *musbyum A* 'ties' discussed above. This verb was also discussed briefly in a footnote in the noun chapter. Its paradigm, along with variants, is as follows:(101)

<i>qappyum A</i>	//	<i>qasiibyum A</i>	//	<i>qasuubyum A</i>	=	<i>qappyum A</i>
<i>qaptam</i>						<i>qap\emptysettam</i>
<i>qappi</i>						<i>qappi</i>
<i>qappoo</i>						<i>qappoo</i>

There is also a noun derived from this verb, *qasiIBYI A* 'holiday, celebration; play, game'. A surface morpheme-cut gives the stem *qapp-A*, but there is much more than meets the eye here. The variants only need be lined up to see that there has been assimilation in the two-consonant version of the imperfect, and therefore of the entire paradigm:

<i>qasiib-</i>	A
<i>qasuub-</i>	A
<i>qap\emptysetp-</i>	A

The features to note here are: (1) free variation between i and u, also noted in the noun chapter, and ascribed to influence from standard Japanese,(102) (2) correspondence of b with p at the end of the stem (a

- (101) The form *qappyum A* is from HUT 1959B, and the forms *qasiibyum A* and *qasuubyum A* are from Martin 1970. The perfect and tentative forms are worth rechecking, because Martin (p.c.) cannot find corroboration for these forms in actually elicited notes; thus the forms may be based on his own analogy from other verbs, and therefore may possibly be fictitious.
- (102) Here, too, there appears to be influence from standard Japanese, but of a slightly different sort. The vowel correspondence between Japanese and most Ryukyuan dialects is not the expected one for 'play'--Japanese has *asob-* and Ryukyuan has **asub-*. Thus the Shodon form *qasiibyum A* takes into account the Ryukyuan vocalism, while the form *qasuubyum A* probably is an archaized version of the NJ stem with added Shodon imperfect suffix, since all speakers know that the normal correspondence for NJ o is Sd u.

correspondence along the voicing axis), (3) correspondence of s with p in the etymological second syllable (a correspondence along the place-of-articulation continuum). A reconstruction of *asub- A is straightforward, and yields the sound change *sb > pp, which is one of place of articulation for the first consonant and of voice for the second. The change is ordered after Syncope-2, since Syncope-2 feeds it. It is now immediately apparent, though, that the reconstruction does not jibe very well with the fact that musbyum A has ..sb.., the very starting point for the assimilation seen in *qasbyum A > qappum A. There are two possible solutions to the problem. Either musbyum A is a post-assimilation borrowing from Japanese, and therefore untouched by the change;(103) or else it is the result not of Syncope-2, but of Homorganic Vowel Drop. In that case the etymology cannot be *musub- B, which would have yielded x mupp- B, with a consonant cluster identical to qapp- A, since it would have undergone Syncope-2 and then the consonant-cluster assimilation. Rather it must be *mosob- B, with non-high vowels, in order to escape the effects of Syncope-2.(104)

(103) Shuri has the archaic musibuN A and newer musubuN A, with the same accent as Shodon, and their accents differ from the atonicity of NJ musubu~ '[id.]'. These facts suggest that this is not a Japanese loan in Shodon, since Shodon and Shuri agree as A, and since atonicity in NJ is also equivalent in the vast majority of verbs to Ryukyuan A as well, while a loan would have been B in Shodon, the atonic category.

(104) In fact, as far as I am aware, HVD never occurs in an environment that is required to be a sequence of etymological high vowels; that is, it seems to be a phenomenon that affects only etymological non-high vowels. But it is also apparently sporadic, since not all series of non-high vowels appear to be affected by it. Apparently the sound change occurred after Syncope-2 and before Raising, since non-highness defines that class of vowels to which it applies, and since the sound change would surely have

The form qaptam A 'played' is of even greater interest, because the expected form is x qasdam A or x qattam A. The following sequence is expected according to the sound change rules:

```
*asubu+tamu A
*asubtam A      (Syncope-1)
*asubdam A      (*t > *d / *b___)
*asudam A      (Consonant Cluster Simplification)
*asidam A      (*su > *si)
*asdam A      (Apocope/Syncope-2)
?*attam A      (Consonant Cluster Assimilation)
```

It is not clear why the form qaptam A is not x qattam A, assuming that an assimilation similar to *..sb.. > ..pp.. is possible, again, one of place of articulation and of voice. Perhaps this form existed once, and may even be found in a closely-related dialect. The form qaptam A is analogical, and it is possible that *qattam A was its immediate precursor. If so, then the forms would have been similar to the two-consonant k-stems, in that one geminate consonant is seen throughout the paradigm (either ..kk.. or ..pp..), except for cases involving *t-based suffixes, where another geminate is seen (..tt.. in both cases--ignoring palatality--with the assimilation in favor of the initial consonant of the suffix). The form qaptam A is evidently a reanalysis based on the surface qapp- A seen in all parts of the paradigm except the ones followed by a *t-initial suffix, and thus represents a reduction in the surface phonology of a three-syllable cluster /ppt/ to [pt]. The reanalysis is ordered after the formation of ..pp.., since that geminate is required as its input.

affected some etymological high vowels as well, if it had happened after Raising.

4.7.4 Analogical Changes to Infinitives of Two-Consonant Verbs

All seven verbs so far discussed take part in one more analogical change left for discussion until now.

4.7.4.1 Two-Consonant-Stem Infinitives

None of the seven verb infinitives can be derived using regular sound changes, and they are in fact the results of analogy. Recall that *CVCICI nouns all have the shape CVCV(V)C(V), as in khagyIrYI A 'limit' and qakuUBYI B 'yawn', and recall also that qappyum A has both qasiBYI A 'game, etc.' as an equivalent deverbal noun, and qasiibyum A and qasuubyum A as free alternants. According to the formula *CVCICI > CVCV(V)C(V), the following infinitives are expected of each of the seven verbs: (105)

*ariki B 'walking'	x qaryiIkYI B	qakkyi B
*o/udoroki B 'being surprised' or	x quduurukYI B or	qudukkyi B
*o/udoruki B	x quduruk B /	
	x qudurkyi- B	
*iki B 'living' or	x qyikyil B or	
*ikiri B	x qyikyilrYI B	qyikryi B
*sug/ki B 'exceeding' or	x sig/kyil B	
*sug/kiri B	x sig/kyilrYI B	sikryi B
*nu/osumi B 'stealing'	x nusilmYI B or	nusmyi B
*nu/osomi B	x nusumYI B	
*mu/osubi A 'tying' or	x musilBI A or	musbi A
*mu/osobi A	x musuUBI A	
*asubi A 'playing'	x qasiIBI A	

But, instead of CVCV(V)C(V), the actual infinitives are CVCCV, a form associated with the pre-Sd shape *CVCICE. The reason for the discrepancy is analogy, as it usually is, but here a good reason must be

(105) The form qyikyil B exists, of course, but as a noun meaning 'breath', and I have assumed the usual working of analogy in the b-stems to change *.b(y)i to ..bi-, with a phantom non-high vowel "e." I have not taken account of HVD in the chart.

found for why the verbs undergo such analogy but nouns do not; it is to be found in the notion of embeddings of alternations. The only alternation that nouns of *CVCICI shape take part in is that of the reflex of that shape in modern Shodon dialect: CVCVVCV- / CVCVC. But any possible alternation of that sort in the verbal infinitives is squelched by the larger set of verbal-paradigm alternations in which it is embedded. Those alternations are not derivational but rather paradigmatic, and this is important, too, because merely derivational alternations do not seem to force analogical shifts, as can be seen by the catalectic adjectives (CVC(V(V)-). And the perfect example of how an infinitive must once have looked before analogy reduced the complexity of verbal noun-like alternations is the infinitive-derived noun qasiBYI A 'play, etc.', which has undergone neither the analogical shift toward CVCCV nor the reanalysis of final ..YI to x ..I or x ..i on analogy with the gerunds, since, as a noun, it has been cut away from the verbal system.

Now just what is the source of that analogy? Any part of the paradigm of each verb that has the etymological sequence *CVCICE(..) will result in the NSd form CVCCV(..), without analogy. So, for example, *sug/kir+i+te B 'exceeding (gerund)' will yield *sug/kitye B (as will any original *sug/ki+te B, for that matter), and that quite naturally leads to modern siktyi B.(106) The same is true for tentatives, negatives, perfects, and so on. Those forms all lead to surface stems with the shape CVCC-. But the pre-analogy infinitive

(106) But see below for a fuller analysis.

surface stems had two shapes, depending on what followed, namely *CVCVC- and *CVCVVC-, neither of which jibed with the aforementioned CVCC- shape. The analogical pressure, then, was quite obviously in favor of the part of the paradigm where stem allomorphy was kept to a minimum, and analogical change resulted:

*CVCV(V)C- → CVCC-

4.7.4.2 The Two-Consonant-Stem Imperfect

Now the imperfect is based on the infinitive, being formally an etymological combination of infinitive and existential auxiliary, and semantically an etymological present progressive. Why, then, do two-consonant-stem imperfects not exhibit a different kind of shape, as infinitives themselves are thought to have once done? First, note that one verb, qasiibyum A // qasuubyum A, does in fact have free alternants that look like the sort of thing that is expected. But closer scrutiny is required. First of all, why is it that the most altered of all the two-consonant verbs should be the most conservative when it comes to imperfect forms? Secondly, there is another two-consonant verb, not mentioned so far, nipRyum A // nibiiRyum A 'sleeps', that has an irregular relationship between its two free alternants, since only *b(y)i and *bu are capable of Apocoping, yet the alternant with ..bii.. would have come, all else being equal, from *..be... The expected CVCVVC- alternant is x nibuur- A, because of the perfect niptam A 'slept'. Such an irregularity causes doubts about the conservatism of the CVCVVC- as opposed to the CVCC- stem.

In addition, if Contraction is ordered before Lengthening-1, then the lack of any evidence whatever for Lengthening in an etymological second-syllable infinitive suffix in the modern imperfect would be handily explained as the Contraction sound change bleeding what would otherwise have served as input into the Lengthening sound change, whereas the reverse order would have Lengthening-1 bleeding the Contraction sound change, with the result that unacceptable forms are produced:

WRONG SEQUENCE:

	*yo/umi#wo/umu B	*'is reading'
x	*yo/umii#wo/umu B	(Lengthening-1)
x	*yo/umiyo/umu B	(Homorganic Gliding)
x	*yo/umyio/umu B	(Apocope-2)
x	yumyiyum B	(Raising; 'reads')

RIGHT SEQUENCE:

	*yo/umi#wo/umu B	*'is reading'
	*yo/umiyo/umu B	(Homorganic Gliding)
	*yo/umyo/umu B	(Contraction)
	*yo/umyoo/uumu B	(Lengthening-1: applies to *CVCECI(..))
	*yo/umyo/um B	(Apocope-2; concomitant Shortening)
	yumyum B	(Raising; 'reads')

Lengthening-1 applied to *yo/umyo/umu B, but to the etymological third syllable, since Contraction had bled away the original second-syllable environment. The same principle of the bleeding of environments for Lengthening-1 by Contraction is also applicable to the two-consonant stems, with the following results:

WRONG SEQUENCE:

	*ariki#wo/umu B	*'is walking'
x	*ariiki#wo/umu B	(Lengthening-1)
x	*ariikiyo/umu B	(Homorganic Gliding)
x	*qariikyo/umu B	(Contraction)
x	*qariikyo/um B	(Apocope-2)
x	qaryiikum B	(Raising; 'walks')

RIGHT SEQUENCE:

*ariki#wo/umu B	*'is walking'
*arikiyo/umu B	(Homorganic Gliding)
*qarikyō/umu B	(Contraction)
-----	(Lengthening-1: does not apply to *CVCICE(..))
*qarkyo/um B	(Apocope/Syncope-2)
*qarkyum B	(Raising)
qakkyum B	'walks'

The working of Contraction in this case is on the syllable following the one that is normally a candidate for Lengthening-1; if Contraction had not already occurred, the resulting *CVCICI.. shape would have forced Lengthening-1, while the reverse order ensures the shape *CVCICE.., which is exempt from Lengthening-1, as explained in previous chapters. It is evident, then, that CVCC- is the regular result here. The forms qasiib- A and qasuub- A are probably a combination of the influence of the mainland Japanese form asob-~ and the noun qasiIBYI A 'play'.

4.7.4.3 The Two-Consonant-Stem Perfect

The two-consonant-stem perfect and gerund are explained in much the same way as the imperfect. There are two alternative solutions that explain the form of the perfect and gerund. One has Lengthening-1 happen before Syncope-1 and Consonant Cluster Simplification; the other has it happen after. If it happens before, then the question of whether Shortening in a closed syllable happens or not is crucial to whether the correct results are obtained. First consider the alternative of having Lengthening-1 occur before Syncope-1.

*ariki+tamū B	'walked'
*ariki+tyamū B	(Progressive Palatalization)
*ariiki+tyamū B	(Lengthening-1)
*ari(i)ktyamū B	(Syncope-1; Shortening in closed syllable?)

At the point that Syncope-1 takes place, two possibilities must be explored, one where Shortening in a closed syllable occurs, and one where it does not. If Shortening does occur, then the progression can be picked up in the chart below the following, with Consonant Cluster Simplification. The following chart picks up the progression of changes for the unshortened version.

x *ariiktyamu B	
x *ariityamu B	(Consonant Cluster Simplification)
x qaryiityam B	(Apocope-2)

The following is the progression of changes in the case where Lengthening-1 follows rather than precedes Syncope-1 and Consonant Cluster Simplification.

*ariki+ttamu B	'walked'
*ariki+tyamu B	(Progressive Palatalization)
*ariktyamu B	(Syncope-1)
*arityamu B	(Consonant Cluster Simplification)
*arityamu B	(Lengthening-1: does not apply to *CVCICE..)
*qartyam B	(Apocope/Syncope-2)
qattyam B	(*rt > tt)

It is clear that the second of the two solutions is the simpler, and thus to be preferred.

Chapter V

CONCLUSION

Several questions remain to be addressed in future research. These include doubts about the effect of the enclitic sequence *-nyi-m* on noun shape, discussed in the noun chapter; whether the hypothesis that a following high vowel lowered a preceding high vowel has merit in its present form; and the problem of the ultimate forms underlying the conclusive forms of Shodon verbs. Naturally I believe that additional internal reconstructions of other dialects will be helpful in answering these questions. The closer the dialect is to Shodon, the less independent internal reconstruction will have to be done, since the point at which the dialects diverged will not have been too far in the past. It must be clearly kept in mind, however, that the synchronic system of any dialect for which one uses such a shortcut has to be thoroughly understood. It is also paramount to employ the comparative method on dialects the synchronic structure of which is well understood, in order to grapple with points that internal reconstruction is simply unable to answer, either because it is blind to changes that have left no synchronic trace in the structure of the dialect, or else because more than one hypothesis has been generated by the data, and no internal criterion exists for making the decision.

I hope I have shown that internal reconstruction within Shodon dialect, with its rich morphology, is capable of generating a large number of sound-change hypotheses (some competing to explain one phenomenon), which can ultimately be used to clarify a great deal about Ryukyuan language prehistory through comparison with reconstructed sound changes in other dialects. It is not my intent to prove that internal reconstruction can overshadow and displace comparative reconstruction. Each method has different and to some extent complementary strengths and weaknesses. Rather, this work represents a desire to be isolated from the pressures of comparison with mainland dialects, and even with other Ryukyuan dialects, so that the actual synchronic structure of one and only one system (i.e., Shodon dialect in this case) can be allowed to speak for itself insofar as possible.

One danger always present in comparative work is that the system of phonological oppositions in each of the compared dialects will not be fully understood, and that misapprehensions about what is or is not structurally important in one dialect will creep into the reconstructive endeavor. Such misapprehensions are less likely to survive in an internal reconstruction, simply because it assumes from the outset an understanding of the structure of the dialect; no investigator can put a dialect to such close scrutiny for very long and fail to understand what is structurally important in it.

On the other hand, a comparative treatment may miss the fact that some particular phonetic fact about a dialect is of no consequence because there is no phonological opposition underlying it. For example,

the fact that English year is pronounced (in my dialect) with a vowel sound more akin to the vowel of eat than to that of it is of no consequence in the reconstruction of the phonemic oppositions of, say, proto-Germanic, simply because no phonological opposition of those two vowels exists before the consonant r.

In my discussion of Lowering in the adjective chapter I brought in comparative data from Yoro dialect to bolster my internally argued case. It is important to note that the argument about the existence of hi would have no value if there were no hyi in phonological opposition to it after h, as we just saw in the English example. It is also clear that more internal and comparative data are needed before the hypothesis can be considered sufficiently secure.

The same can be said about the detailed reconstruction of the sound-change rules that led to some aspects of modern noun shape: not enough is known about the forms of various noun classes with the enclitic pair -nyi-m 'also to'. I have felt confident enough to reconstruct the starting points, without knowing some of the details of the modern morphology, and simply assume that more data will enrich, not overturn, what has so far been reconstructed.

As for the forms that ultimately underlie the conclusive forms (and allied forms such as the attributive) of verbs like qam B, this is precisely the area where the most detailed work of all needs to be done. I would in the future like to entertain the hypothesis that the attributive -n of these verbs is secondary, and that it was split off from -r by analogy. There is adequate reason to believe that one of the

allomorphs of -r is a nasal, before another nasal, just as the allomorph before s is -s. This supposition may be used to see if the independent form -n might not have been split off by analogy from the phonetic form -n of historically older *-r in the pre-nasal position. We would be heartened in such an attempt by the fact that the suffix corresponding to Sd -n is confined to Northern Ryukyuan, and not universal even there. Much work of this kind remains to be done.

In addition, Hattori (1976, 1978-79) has quite independently reconstructed the sequence *.rm. for proto-Japanese, and it will be well worth while to see how that reconstruction relates to my own reconstruction of a *.rIm. sequence in Shodon verb prehistory.

In closing I wish to reiterate that I concur with Hattori's (1979) plea, mentioned in the Introduction, for more internal reconstructions of dialects, independent of our knowledge of the history of the mainland standard dialects of (earlier) the Kyoto/Nara dialects and (now) Tokyo dialect. However I wish to add one more thought: to a historical linguist no dialect has any richer or more valuable a history than any other. That Nara, Kyoto, or Tokyo should have become political or cultural centers has nothing to do with linguistics, only with politics or culture. Any dialect for which data are plentiful should be considered the equal of any other--a dialect deserves careful study, no matter how many people speak it, no matter how socially important it is. (If anything, the dialects of the Ryukyus may well deserve more careful study, partly because their history is so divergent from that of the mainland dialects, and partly because they are rapidly approaching

extinction.) Finally, I believe that the internal history of the dialects of the Ryukyus themselves is valuable to reconstruct, even if it were to shed no light at all on non-Ryukyuan Japanese language history.

Appendix A

NOUN LISTS

What follows is a series of noun classes, arranged in the same order as in the discussion of noun classes and their historical origins in the body of the noun chapter. It is meant to be read along with that discussion.

CLASS (7a): TOP-HEAVY DISSYLLABLES (CVVCV)

The members of this class with a long first vowel (there are other subclasses as well) number eleven, of which three are Sino-Japanese, and thus obviously loanwords. Of the remainder, two are obvious compounds (qoo#hwa^ 'green leaves' [anomalous accent], waa#khya^ 'we, us'), and four are suspect:

- (1) kyiiya^ 'cicada' ?< *kyii+ '(cry of cicada)' + +a '(animal suffix)'
[this also has CyV, making it a candidate for Contraction];
- (2) qoosa^ 'seaweed' ?< *qoot+ 'green' + +sa '?' [Martin p.c.: "? < qoo-[ku]sa", *'green grass'; accent reversal is anomalous];
- (3) qyeeda^ 'dragonfly' [by comparative method; cf. Shuri qaakeezuu^ ' [id.]' < *akezu^, which shows that the Sd form has the 'animal' suffix +a; the form would otherwise have been x qyeedi^ / x qyet^; this word is probably a borrowing from a more northerly Amami

dialect in any case, since Lenition of *VkV in Sd should have resulted in x qyeheedi[^] / x qyehet[^] or x hyeedi[^] / x hyet[^]; but by internal reconstruction criteria, this item meets the specifications for a reflex of a contracted form];

- (4) thoogi[^] 'hoe' [Martin (SdELex) suggests < *'T'ang [=foreign] hoe', although *'T'ang [=foreign] wood' may be more accurate].

Items (1) and (3) may be the results of Contraction, even if we know nothing else about them, as may the remaining two forms: qyeeda[^] 'interval' and qyiibi[^] 'finger', both of which begin with Cy... I accordingly assume that this class has no unexplainable members.

CLASS (7b): TOP-HEAVY EXPANSIVE DISSYLLABLES (CVVCV(V))

There are seven members of this class with a long first vowel, of which five are Sino-Japanese borrowings. Of the remainder:

- (1) khyáá#gi(i) 'black pine' is a compound <- khyáá# '? black pine' and #gi(i)~ <- khi(i)[^] 'tree' (the gloss is a personal communication from Samuel Martin; Martin 1970.118b has 'kind of tree'; "~" shows neutralized accent; cf. NJ keyaki[^] 'zelkova tree');
- (2) syeehe(e)[^] 'cough' is the residue, said to be the older form of sekyí(i) '[id.]', which is in turn probably a borrowing from NJ sekí '[id.]' [note congruent accent, and strange tonicity of the CVCV(V) shape type, for the regular accent of which, see below].

CLASS (9): TOP-HEAVY APOCOPATING TRISYLLABLES (CVVCVC(V))

Fourteen members of this class have a long first vowel, of which nine are Sino-Japanese. Of the remainder, four are obvious loans from Standard Japanese: The first three are *kháásan(u)* 'mother' [cf. *qamma(a)* '[id.]'], *thóósan(u)* 'father' [cf. *dyu(u)^* '[id.]'], and *thóótyan(u)* 'daddy'. The final *..n(u)* is the most obvious giveaway, since we know that the equivalent Standard Japanese *..san*, *..tyan* come from *..sama*, and so Shodon should have had an *..m(..)*. The fourth is *qwááyak(u)* 'senior official' (corrected from the Martin 1970:119a text *qwááyan(u)* 'junior official'--Martin p.c.), a part-NJ/part-SJ borrowing from *uwayaku^* '[id.]'. The remaining form is then *syuu#duk(yi)'/^* 'tide time' (above), a compound: *syuu+'/^* 'tide' + *+duk(yi)~* 'time'; it may, however, also be a loan--cf. NJ *siodoki'/^*, also with wavering accentuation. Cf. Sd *qusyu(u)^* 'tide', NJ *usio^* '[id.]', both different from the form in 'tide time'.

CLASS (11c): MID HEAVY-TRISYLLABLES (CVCVVCV)

Twenty-three members of this class have a long second vowel, of which one is a Sino-Japanese loan. The following five words result from compounding, but they show no sign of that compounding, so the compound boundary is bracketed:

- (1) *dukuu[#]ba^* 'fang of snake' cf. *duku(u)^* 'poison', and *hwa(a)^*
'tooth'

- (2) qasaa[#]ti^ 'day after tomorrow' [cf. qasaa[#]gao^ 'morning glory'
[loan], qasaa#thida(a)^ 'morning sun'];
- (3) qamaa[#]gu^ 'sweets' [cf. qamá(á)+ / qamaa+^ 'sweet'];
- (4) tha[#]muutu^ 'sleeve' [cf. tha[#]si(i)k(yi)^ 'a sleeve-tie sash',
thi(i)^ 'hand'];

and probably:

- (5) yi[#]gaawa^ '(water) well' [cf. khó(o) 'river', with an assumed
preform *kawa^ 'river' of the latter, and *yi/e^-"-kawa^ *'?well
river' of the former];

The following two words have medial ..kh.., but short vowels in the
second morpheme, so I assume that they contain affixes, which have a "+"
boundary:

- (1) yináá+kha 'country(side)'
(2) man/raa+kha^ 'toilet [rustic]' [same reason as above];

In addition, probable borrowings from Japanese include:

- (1) khinoo+kho^ 'mushroom' from J kínoko '[id.]' [note ..noo.., the
genitive particle, where Sd would have ..n..; if ..nookho is not
seen as having an affix boundary between ..noo.. and ..kho, then
the problem becomes one of why there has been no Velar Lenition (it
may be that it occurs only in second syllables, which are also the
only Lengthenable syllables); it should be noted, however, that this
word is a partial calque, since the expected x kyí.. has been
replaced by the Sd equivalent, for 'wood', khi..., and this fact may
explain why the final syllable has not been deaspirated to ..ko.];
- (2) qathaama^ 'head' from J atamá '[id.]' [cf. khama(a)ty(i)^ '[id.]'];

- (3) qyikhaada^ 'raft' from J ikada^ '[id.]' [note lack of Progressive Palatalization];
- (4) qyithooko^ 'cousin' from J itóko '[first] cousin' [note lack of Progressive Palatalization; we would expect x qyithyooko^] or x qyithyookho^ (cf. khinookho^ above)];
- (5) thakaara^ 'treasure' from J takará '[id.]' [lack of velar lenition];
- (6) thamaago^ 'egg' from J tamágo '[id.]' [cf. the more frequent native khuuga^ '[id.]', not present, so far as I know, outside of the Ryukyus];
- (7) syiguure^ 'shower' [If this were from pJ *sigure, then it should lead to x syikri^; this is enough to suggest that this is a loan from NJ (cf. NJ sigure^), and since the vocalism is anomalous both here and in qaraare^ below (we would expect x qaraari^), I treat them both as loans.]; and
- (8) qaraare^ 'hail'.

This leaves a total of eight presumed nonloans and noncompounds in this class:

- (1) quwáása 'rumor';
- (2) thatááme 'mat';
- (3) thykyáára 'strength';
- (4) khohoro^ 'heart';
- (5) khtuuba^ 'word';
- (6) myinyaato^ 'port' [Martin 1970:120a provisionally corrects mi.. to myi.., and this would appear to be correct, judging from the following palatal syllable, the probable result of Progressive

Palatalization ;unaspirated t remains a problem, treated briefly below under *natha(a)^.*];

- (7) *skaama^* 'morning'; and
- (8) *sigataa^* 'shape'

CLASS (12a) ONE TYPE OF APOCOPATING TETRASYLLABLES (CVCVVCVC(V))

There are twelve long-vowel members in this class, counting the tonic and atonic variants of 'nine' as one: *khohoonot(i)'/^*. With the possible exception of *muraasak(yi)^* 'purple', they are all complex, but they are not morphophonemically anomalous, so do not require a boundary marker; I accordingly write it in brackets:

- (1) *khohoono[+]t(i)'/^* 'nine' <- *khohoono+''/^* 'nine' + *+ti* '[counter]';
- (2) *qaráá[#]mun(u)* 'wild person';
- (3) *thatee[#]mun(u)^* 'building';
- (4) *khidaa[#]mun(u)^* 'animal';
- (5) *nataa[#]wun(u)^* 'small axe' [note irregular unaspirated ..t.. in both this compound and in the free form *nata(a)^* '(kind of axe)'];
- (6) *qaraa[#]mun(u)^* 'new thing';
- (7) *qyinnu[#]dyin(u/yi)^* 'killing dogs' [cf. *qyin(u)'* 'dog'];
- (8) *sakaa[#]dik(yi)^* 'wine cup' [loan from NJ *sakazuki^* 'id. ']; note lack of Velar Lenition in first morpheme (cf. *sehé(e)* 'wine'); but NJ ..zu.. has been archaized to ..di..];
- (9) *gumuu[#]gut(i)^* 'rubber shoes [i.e., overshoes]' [loan from NJ *gomúgutu* '[id.]'; NJ *gómu* is a loan from a European language,

equivalent to English gum[-rubber]; gumuu-[^] is being treated as if it were a pre-Shodon word *go/umo/u[^], archaized right down to the reverse accent; ..[#]gut(i) is more interesting, because the free form in Shodon, also a loan, is khtsu(u)[^], with very rare [ts], different from the [t] of ..[#]gut(i)~[~], and an accent-neutralized word shape (see below for neutralization of vowel length of etymological high vowels in neutralized atonic second members of compounds), as in the following item; the compound has been thoroughly archaized];

- (10) khanaa[#]tity(i)[^] 'hammer' [cf. khaní(i) 'money' and thtyi(i)[^] 'mallet' (neutralized to -tity(i)~[~], as in the previous item); there must be another meaning of the word khaní(i), i.e., 'metal', as in Japanese; perhaps this is an old NJ loan (or calque, because of the lack of a voiced second member), since a hammer (as opposed to a mallet) is an object that may not have had a name in proto-Ryukyuan, (i.e., not have been part of the cultural stock-in-trade of pRk speakers) and could easily have been borrowed during premodern times; the accentuation of NJ kanazúti '[id.]' is the reverse];

- (11) nanaa[#]tar(yi)[^] 'seven people'.

CLASS (1): EXPANSIVE MONOSYLLABLES (CV(V))

There is a total of 64 words in the one-syllable class, of which 10 are Sino-Japanese borrowings, and 54 are native, or at least not obviously

borrowings from other dialects. Of the 54, 30 are atonic and 24 are tonic. The Sino-Japanese borrowings are:

bó(o) 'stick' [cf. SJ boo '[id.]']

gó(o) 'checkers' [cf. SJ go '[id.]']

do(o)^ 'bronze statue'

[cf. SJ zoo 'statue', doo 'copper, bronze']

do(o)^ 'elephant' [cf. SJ zoo '[id.]']

hu(u)^ 'fate' [cf. SJ hoo^ / hoo 'report']

no(o)^ 'brain' [cf. SJ noo '[id.]']

ryu(u)^ 'dragon' [cf. SJ ryuu '[id.]']

syo(o)^ 'personal character' [cf. SJ syoo '[id.]']

thya(a)^ 'tea' [cf. SJ tya '[id.]']

to(o)^ 'wisteria' [cf. SJ too [bound form] '[id.]']

(Martin (p.c.) thinks this is a mistake for tho(o)^.)

The atonics are:

du(u)^ 'body, self'

dyu(u)^ 'father [old],

grandfather [new]'

hu(u)^ 'ear of grain'

hwa(a)^ 'tooth'

hwe(e)^ 'south wind'

hwi(i)^ 'flatulence'

hwyi(i)^ 'vulva'

khi(i)^ 'tree'

kho(o)^ 'skin'

khyu(u)^ 'today'

kwa(a)^ 'mulberry'

me(e)^ 'front'

mi(i)^ 'eye, hole'

mya(a)^ 'cat'

na(a)^ 'rapeweed'

ne(e)^ 'seedling'

no(o)^ 'line, string'

pi(i)^ 'flatulence'

[child's word]

qo(o)^ 'millet'	qwa(a)^ 'pig'
qye(e)^ 'indigo'	so(o)^ 'pole'
si(i)^ 'vinegar'	sya(a)^ 'tongue'
tha(a)^ 'ricefield'	thu(u)^ 'ten' [also tonic]
tyi(i)^ 'woman's breast'	wu(u)^ 'thong'
ya(a)^ 'house'	yu(u)^ 'hot water'

The tonics are:

hú(u) 'sail'	hwá(a) 'leaf'
hwé(e) 'fly'	hwé(e) 'ashes'
hyí(i) 'day'	khí(i) 'hair'
khó(o) 'river'	kwá(a) 'child'
kyí(i) 'spirit'	myí(i) 'fruit'
ná(a) 'name'	qó(o) 'depths'
qyá(a) 'arrow'	qyé(e) 'kind of fish'
qyú(u) 'fish'	qwí(i) 'above'
sí(i) 'shoal'	syá(a) 'under'
syé(e) 'height'	thó(o) 'flatland, plain'
thú(u) 'ten' [also atonic]	tyú(u) 'person'
wá(a) 'circle'	yí(i) 'handle'

CLASS (6): APOCOPATING CONTRACTILE DISSYLLABLES (CV(V)C(V))

All 24 examples of this class are atonic. Of them, 13 are SJ loans, with a remainder of eleven. Of the latter, two are borrowings:

- (1) taabyi[^]/tap[^] 'trip' [this is anomalous both in its initial-syllable vowel length and in the lack of aspiration of the first consonant; we would have expected x thabyi(i)[^]; trips are taken to other places, so I assume that the word itself was brought back from one],
- (2) kho(o)r(yi)[^] 'ice' [this is identified in the verb chapter discussion on deverbal nouns from infinitives as a recent borrowing].

Six are complex lexical items:

- (1) ti(i)+t(i)[^] 'one' [also tonic tit(i)'];
- (2) ra(a)+t(i)[^] 'two' [also tonic tat(i)'];
- (3) myi(i)+t(i)[^] 'three' [also tonic myit(i)']; corrected, by comparison with Martin 1970:l22b, from mi(i)t(i)[^]];
- (4) yu(u)+t(i)[^] 'four' [also tonic yut(i)'];
- (5) mu(u)+t(i)[^] 'six' [also tonic mut(i)'];
- (6) ya(a)+t(i)[^] 'eight' [also tonic yat(i)'].

Another two are possible Contractions, as can be seen from the initial Cy..:

- (1) gyubyi[^]/gyup[^] '(kind of cake)';
- (2) kyubyi[^]/kyup[^] 'belt' [Martin p.c.: "?*kyi#obyi", *'wear belt'].

The remaining item is residue:

- (1) qo(o)k(yi)[^] 'fan';

CLASS (4): EXPANSIVE DISSYLLABLES (CVCV(V))

I have divided the members of this very large class into loans, possible loans, analogical doublets, and probable native words. They appear in that order, subdivided in each case as tonic and atonic, and numbered within each subclass. Any necessary discussion of the forms has been added.

LOANS:

TONIC:

- (1) basyó(o) 'place' [NJ-SJ basyo[^] '[id.]']
- (2) gyithá(a) 'clogs' [in any case a loan from J because of lack of Progressive Palatalization, if we see the presumed preform as *gitá. If it is *gyetá, then the pre-Sd must have *ye, for which there otherwise appears to be little need. J has geta[^] '[id.]'; also, cf. qaddyaha(a)[^] '[id.]', surely older.]
- (3) hudyí(i) 'wisteria' [NJ huzi[^] '[id.]'; this creates problems if not seen as a loanword--if we say that it is *fu/odyé (with a mid vowel), we are creating a very small class of words that require this pre-Sd vowel; it must be a loan]
- (4) hyidá(a) 'lap' [The first syllable does not palatalize the following one. Either it must be reconstructed as *fyedá (something to be avoided if possible, so as not to reconstruct otherwise unnecessary *ye), or else it is a loan that came in after the Progressive Palatalization sound change occurred, but before the Deaffrication of *z to d. The second choice seems better, because there is an alternative word for the same meaning: tibú(ú)sy(i) < *tubúsi. Cf. Sr[hwisya 'foot/leg' for a word with

very different but related meaning, different voicing for the historical sibilant, and Progressive Palatalization, all indicating that the Sr (but not the Sd) word has early Ryukyuan roots.]

- (5) myikyí(i) A 'trunk' [NJ miki[^] '[id.]' Martin (p.c.) changes 'stem' to 'trunk'; since this word would otherwise require the undesirable *ye, I assume that it is a loan]
- (6) qumyé(e) 'plum' [cf. qumí(i) 'plum-like local fruit'; NJ ume[^] '[id.]'; note perfect semantic and good phonetic fit to the NJ version, in contrast to the imperfect fit of qumí(i), suggesting that the latter is original, and that qumyé(e) is a loan.]
- (7) saká(a) 'slope' [NJ saká '[id.]'; note lack of Velar Lenition and identical accent.]
- (8) syekyí(i) 'cough' [cf. syeehe(e)[^]]
- (9) syiná(a) 'goods' [variant of syinyá(a) '[id.]' (see below); NJ sina[^] '[id.]'; a doublet brought about by competition between the imported NJ word and the native word, but with regularized accent in favor of the native version]
- (10) thuryí(i) 'shrine gate' [NJ torii[^] '[id.]'; Since Shintô and its shrines and shrine gates are imports from the Japanese mainland, this word has to have been borrowed along with that importation, but it is not a recent borrowing, because the accent is reversed. According to Yamashita (1974:77), the oldest shrines appear to date from the time of the mainland-Japan Gempei wars (late twelfth century), when Taira refugees are said to have come to Amami; there is a Shintô shrine in Shodon village dedicated to Taira no

Sukemori. Most shrines date from the Genroku era, and were built by Satsuma officials. So this word likely dates either from the twelfth or the seventeenth century.]

(11) tyiryí(i) 'geography' [SJ tíri '[id.]']

ATONIC:

(12) basya(a)^ 'banana tree' [SJ basyoo^ '[id.]'; cf. sta(a)^ : satóo 'sugar' and yuwa(a)^ : ioo^ 'sulfur', both also SJ; it is not clear why the older ..eu of SJ basyoo^ and ..au of SJ satau^ and yuwau^ should have become ..aa in Sd and other Ryukyuan dialects--perhaps the ancestral *..ǵǵ had already raised to the current ..oo by that time, but that does not account for basya(a)^ <- ESJ baseu^, with no low vowel]

(13) byiwa(a)^ 'loquat' [SJ bíwa '[id.]']

(14) duku(u)^ 'poison' [SJ dokú '[id.]']

(15) dyiryó(o)^ 'fireplace' [Sr ziiiru B < SJ ziro '[id.]']

(16) huye(e)^ 'whistle' [NJ hue^ '[id.]'; note congruent accent and height of final vowel]

(17) hwku(u)^ 'clothes [formal word]' [SJ hukú '[id.]']

(18) khyku(u)^ 'chrysanthemum' [SJ kikú '[id.]']

(19) kwasyi(i)^ 'pastry, cakes' [ESJ k[w]ási '[id.]'; reversed accent suggests old borrowing]

(20) kyinu(u)^ 'silk' [NJ kínu '[id.]'; this is one of a group of words having to do with clothing that show an interesting relation to one another:

pre-Shodon	Japanese	Shodon	gloss
*kinu^ 'clothing'	----->	kyin(u)^	'clothing-1'
	hukú -->	hwku(u)^	'clothing-2 [formal]'
*ito^ 'silk'	----->	qyithyu(u)^	'silk-1'
	kinu^ ->	kyinu(u)^	'silk-2'
	íto ->	qyitho(o)^	'thread'

Note that the following items are related by form:

kyin(u)^ : kyinu(u)^ ('clothing-1 : silk-2')
 qyithyu(u)^ : qyitho(o)^ ('silk-1 : thread')

In the first pair Progressive Palatalization is impossible because the high vowel of the following syllable blocks it. In the second pair, it is possible, and in fact is one of the factors that identifies the second member of the pair as a loan. In the first pair either the accent of the first member has changed to B from A because of the *.nu second syllable; or the accent was B in the first place and then the word became "irregular" in shape (actually, a special subclass) after Lengthening occurred. The accentual correspondence with other dialects shows that the latter choice is correct--the proto-Japanese accent category is 2.4 (Martin, p.c.). Kinu(u)^ is therefore to be considered the loan of the pair. Some interesting observations also come to light when we look at the second pair. First of all, we see that Progressive Palatalization distinguishes the elder of the pair, and so it is possible to determine that the first member of the pair is (relatively more) native. Secondly, we note that the first member has also undergone vowel raising in the second syllable, while the second has not.]

- (21) myisu(u)^ 'beanpaste' [NJ míso '[id.]'; note lack of Progressive Palatalization]
- (22) nyiku(u)^ 'meat' [SJ níkú; cf. syisi(i)^ '[id.]', NJ sísi 'flesh']
- (23) qyitha(a)^ 'board' [NJ íta '[id.]', so has to be old loan; cf. qura i thya(a)^ 'boards, boarding', with Progressive Palatalization, as expected]
- (24) qyitho(o)^ 'thread' [NJ íto '[id.]'; cf. qyithyu(u)^ 'silk', and kyinu(u)^ 'silk' above for discussion]
- (25) sake(e)^ 'boundary' [NJ sakái '[id.]'; note that Monophthongization (inferred from the NJ form) happened after borrowing, unless this word was borrowed from a dialect that had already Monophthongized it. If so, Velar Lenition preceded Monophthongization.]
- (26) sta(a)^ 'sugar' [SJ satoo; cf. basya(a)^]
- (27) syiwa(a)^ 'wrinkle' [NJ siwa^ '[id.]'; we expect x sya(a)^; see nyiwá(a)]
- (28) syka(a)^ 'deer' [NJ siká '[id.]'; note the lack of Progressive Palatalization]
- (29) suso(o)^ 'bottom of skirt' [NJ suso^ '[id.]'; cf. subá(a) '[id.]']
- (30) suzu(u)^ 'bell' [NJ suzu^ '[id.]'; note skewed correspondences of ..z.. (found only in loans in any case), and of pJ *u after dental obstruents]
- (31) thyade(e)^ 'wooden teacup stand' [SJ tyadai^ '[id.]']
- (32) yudí(i)^ 'picture' [SJ ézu 'drawing, map, plan'; an example of metathesis:

yudi(i)^ < *yude^ < *yedu^ <- loan - ESJ yézu
 [metathesis of vowel segments or of height and backness]

also:

yiri(i)^ 'collar' < *yire^ < *(y)eri^ (cf. NJ erí)
 [ordering: (1) Prog. Pal., (2) metathesis]
 [metathesis of vowel segments or of height]
 byini(i)^ 'red' < *bine^ < *beni^ (cf. NJ béni 'rouge,
 lipstick; vermilion (with -iro)')
 [ordering: (1) Prog. Pal., (2) metathesis]
 [metathesis of vowel segments or of height]
 [But Martin (p.c.) believes this should be
 corrected to byinyi(i)^.]]

(33) yuwa(a)^ 'sulfur' [SJ ioo^ '[id.]']

POSSIBLE LOANS:

TONIC:

- (1) khaó(o) 'face' [NJ kao^ '[id.]']; it would have been monophthongized if native?; cf. tira(a)^ '[id.]' and qo(o)'/^- 'green' (OJ awo)]
- (2) nyiwá(a) 'formal garden'
- (3) qathé(e) '(mailing) address' [NJ ate^ '[id.]'; from verb infinitive--see the verb chapter for why either this must date from before the time when all infinitives were reanalyzed as having final high vowels, or else it must be a borrowing from after that period, and preserve its final mid vowel for that reason]
- (4) qyiwá(a) 'crag' [NJ iwá '[id.]'; expect x qyá(a)?]
- (5) thaká(a) 'hawk' [NJ taka^ 'kite [= a kind of hawk]'; corrected by Martin (p.c.) from earlier taká(a) in Martin 1970]
- (6) thaná(a) 'shelf' [NJ tana^ '[id.]'; corrected by Martin (p.c.) from earlier taná(a) in Martin 1970]

- (7) tyiryí(i) 'dirt, dust' [NJ tiri[^] '[id.]'; if this is not a borrowing, then it must be reconstructed as *tiryé in order not to be seen as a counterexample to the claims advanced in the body of the noun chapter; only a handful of forms require reconstruction of *ye, all probably loans]

ATONIC:

- (8) haka(a)[^] 'grave' [NJ haká '[id.]'; x haha(a)[^] is expected, but why should this be borrowed at all?; perhaps as a result of changed burial practices after the Satsuma invasion?]
- (9) natha(a)[^] 'kind of axe' [NJ nata[^]; Martin (p.c.) thinks this must be natha(a)[^] as opposed to his (1970) nata(a)[^], and I have made it so here, but it is also possible that this is a loan, borrowed without aspiration from a mainland dialect; note that aspiration is often not present (or at least not recorded) in the vicinity of a nasal (?taná(a), ?nata(a)[^], nuka(a)[^] below, minyaato[^]), and, paradoxically, often present in a nasal-plus-stop cluster (nankha[^] 'seven days')]
- (10) nuka(a)[^] 'ricebran' [NJ nuká; see natha(a)[^]]
- (11) saku(u)[^] 'valley' [a loan if we compare Kyūshū sako '[id.]'; otherwise it must be *saku[^] (not x *sako[^], because it is not NSd x soho(o)[^]--compare thoho(o)[^] 'octopus' : NJ táko)]
- (12) wuryi(i)[^] 'cucumber' [NJ úri '[id.]'; it has been traditionally held that pJ did not have *wu, but this word may just as easily turn out to be evidence against that assertion as it may be a strangely skewed borrowing.]

- (13) yuge(e)^ 'steam' [NJ(-?SJ) yugé '[id.]'; why is it ..e.. and not ..i..?]

ANALOGICALLY RELATED PAIRS

TONIC

- (1a) qaní(i) 'older sister' [NJ ane^ '[id.]'; NJ is atonic, and Sd and Kg are tonic, the expected correspondence; see qanyí(i)]
- (1b) qanyí(i) or qanyó(o) 'one's own older brother' [NJ áni 'older brother'; NJ is tonic, and neither Kg nor Sd correspond, since they are also tonic; there is scant Ryukyuan evidence for the words *ane and *ani south of Amami, the premodern Satsuma domain; I assume borrowing, with analogical change (from *qan(yi)') due to qaní(i) 'older sister', perhaps originally occurring in Kg.]
- (2a) wubá(a) 'aunt' [NJ oba^ '[id.]']
- (2b) wudyí(i) 'uncle' [NJ ozi^ '[id.]'; since this word is semantically parallel to wubá(a), it is also kept phonologically parallel, either by an accent switch from *wudyi(i)^, or by a Lengthening of the final vowel from *wu(")ty(i)'; this situation is shared by the pair qaní(i) : qanyí(i), which see]

NATIVE WORDS:

TONIC:

- (1) habá(a) 'width; influence' [NJ haba^ '[id.]']
- (2) haná(a) 'nose' [NJ hana^ '[id.]']
- (3) haní(i) 'wings' [NJ hane^ '[id.]']
- (4) hatá(a) A 'flag' [NJ hatá '[id.]']
- (5) hudí(i) 'brush' [NJ hude^ '[id.]']

- (6) huyú(u) A 'winter' [NJ is huyú '[id.]'; we expect native Sd ?hwi(i)^. If it is not a loan, then either it must be *fuyó, or else the word class for words ending in *.yu## must have gone to ..yu(u)## instead of the expected but unattested ..i## or ..y##. There is no CVyu## / CVy## (or / CVi##) alternation.]
- (7) hwtá(a) 'lid' [NJ huta^ '[id.]']
- (8) hyigyá(a) 'east' [NJ higasí '[id.]']
- (9) hyigyí(i) 'beard' [Progressive Palatalization; NJ hige^ '[id.]']
- (10) hyimá(a) 'leisure' [NJ hima^ '[id.]'; this and other words where Progressive Palatalization has not occurred through a labial-initial syllable are not necessarily loans, because we see Progressive Palatalization as being unable to affect such a consonant.]
- (11) hyimó(o) 'cord, tie' [NJ himo^ '[id.]']
- (12) khadá(a) 'odor' [NJ kagu^ 'to smell, scent, sniff']
- (13) khadé(e) 'wind' [NJ kaze^ '[id.]' is the final mid vowel to be explained as assimilation to the preceding vowel?]
- (14) khagó(o) 'basket' [NJ kago^ '[id.]']
- (15) khamá(a) 'oven' [NJ kama^ '[id.]']
- (16) khamó(o) 'duck' [NJ kámo '[id.]'; Martin (p.c.) corrects 'gull' to 'duck']
- (17) khaní(i) 'money' [NJ kane^ '[id.]']
- (18) khará(a) 'shell, husk' [NJ kará '[id.]']
- (19) khsé(e) 'habit, wont' [NJ kusé '[id.]']

- (20) khubí(i) 'wall' [NJ kabe^ ' [id.]'; note different vowel in first syllable]
- (21) khubú(u) 'spider' [NJ kúmo ' [id.]'; phonetic correspondence is not good]
- (22) khyinyé(e) 'slave' [NJ ikenie^ 'live sacrifice; victim'; I assume the series of sound changes *qyikhe.. > *qyikhye.. > *qyikhyi.. > khyi.., with a drop of initial *qyi.. (after Progressive Palatalization) that is seen elsewhere as well; a change of *..nyie to *..nyee is expected, but I am at a loss to explain the lack of raising to x ..nyí(i)]
- (23) kurá(a) 'saddle' [NJ kurá ' [id.]']
- (24) kyibá(a) 'fang, large tooth' [NJ kíba ' [id.]']
- (25) mathó(o) 'target' [NJ mato^ ' [id.]']
- (26) mumó(o) 'peach' [NJ momo^ ' [id.]'; see discussion of *mo in verb chapter]
- (27) muní(i) 'chest, breast' [NJ muné ' [id.]']
- (28) murá(a) 'village' [NJ murá ' [id.]']
- (29) muthá(a) 'swamp' [no known NJ cognate, although muta is seen in earlier J]
- (30) nahá(a) 'inside' [NJ náka ' [id.]']
- (31) nunó(o) 'cloth' [NJ nuno^ ' [id.]' NJ niwa^ 'garden'; expect nyá(a)?]
- (32) qagí(i) 'dry land' [NJ ageba^ 'landing place; wharf'; the word comes from a verb infinitive]
- (33) qamí(i) 'wheat-gluten candy' [NJ ame^ ' [id.]']
- (34) qathyá(a) 'tomorrow' [NJ asitá ' [id.]']

- (35) qumí(i) 'plum-like local fruit' [NJ ume^ 'plum (tree)'; cf. qumyé(e) 'plum' (loan)]
- (36) quthá(a) 'song' [NJ utá '[id.]']
- (37) quthé(e) 'arm'
- (38) quthú(u) 'sound' [NJ otó '[id.]']
- (39) qyirá(a) 'jellyfish' [NJ era^ 'gills'; Sr qi(i)raa B 'jellyfish']
- (40) qyisyó(o) 'beach' [NJ iso^ '[id.]']
- (41) sabá(a) 'mackerel' [NJ saba^ '[id.]']
- (42) sará(a) 'plate' [NJ sara^ '[id.]']
- (43) sató(o) 'inhabited place' [NJ sato^ 'village; countryside; one's native place']
- (44) sehé(e) 'liquor' [NJ sake^ '[id.]']
- (45) siná(a) 'sand' [NJ suna^ '[id.]']
- (46) skú(u) / sukú(u) 'bottom' [NJ soko^ '[id.]'; cf. stu(u)^ below]
- (47) subá(a) 'bottom of skirt' [no NJ cognate]
- (48) sudí(i) 'sleeve' [NJ sode^ '[id.]']
- (49) syimá(a) 'sumo wrestling' [NJ sumoo^ '[id.]'; note that the vocalism of the last syllable of this word (also in Sr) is similar to that of, for example, the corresponding syllables of sta(a)^ 'sugar' and NJ satóo '[id.]'; earlier Mainland J sumafu]
- (50) syinyá(a) 'goods' [Cf. the loan syiná(a) '[id.]'; NJ sina^ '[id.]']
- (51) thabá(a) 'bunch' [NJ tába '[id.]']
- (52) thirá(a) 'temple' [NJ terá '[id.]']
- (53) thurá(a) 'tiger' [NJ tora^ '[id.]']
- (54) tibú(u) 'jar' [NJ tubo^ '[id.]']

- (55) timí(i) 'claw, nail' [NJ tume^ '[id.]']
- (56) tirú(u) 'crane' [NJ túru '[id.]'; requires reconstruction as *turo', or else must be seen as loan--*u should not be possible here]
- (57) wuthú(u) 'husband' [NJ otto^ '[id.]']
- (58) yumí(i) 'bride' [NJ yome^ '[id.]']

ATONIC:

- (59) bara(a)^ 'rose' [NJ bara^ '[id.]']
- (60) buku(u)^ 'bubble' [also quwa(a)^; NJ búkubuku 'bubbling(ly)', abukú 'bubble']
- (61) busyi(i)^ 'bamboo joint' [NJ husí '[id.]']
- (62) byiky(i)^ 'frog' [NJ hikí '[counter for animals]', hikigáeru 'toad'; cf. byikkya^ '[id.]']
- (63) byinyi(i)^ 'rouge' [also byin(u)^; NJ béni '[id.]']
- (64) dehe(e)^ 'bamboo' [NJ take^ '[id.]'; this word has obviously been in the language a long time, but why is the accent not reversed? Could it be that the word lost its accent because it once was the second element of a compound? The initial voicing suggests that this is true, but we would expect all such initial-voiced words, where NJ does not have voicing, to be atonic as well. Insofar as there are no tonic words of this form class that begin with b, d, or g, this hypothesis appears to be true. However, we must still explain words such as gan(yi/u)' 'crab' of the apocopating dissyllables.]
- (65) duru(u)^ 'mud' [NJ doró '[id.]']
- (66) gabu(u)^ 'swelling' [NJ kobú '[id.]']

- (67) gakyi(i)^ 'oyster' [NJ káki '[id.]']
- (68) gumi(i)^ 'dust' [NJ gomí '[id.]'; SJ?]
- (69) hadyi(i)^ 'shame' [NJ hazí '[id.]']
- (70) hagi(i)^ 'bush clover' [NJ hagi '[id.]']
- (71) hagi(i)^ 'foot, leg' [NJ hagi 'leg, lower leg']
- (72) hama(a)^ 'beach' [NJ hamá '[id.]']
- (73) hana(a)^ 'flower' [NJ haná '[id.]']
- (74) haru(u)^ 'springtime' [NJ háru '[id.]']
- (75) haryi(i)^ 'needle' [NJ hári '[id.]']
- (76) hasyi(i)^ 'chopsticks' [NJ hási '[id.]']
- (77) hato(o)^ 'pigeon' [NJ háto '[id.]']
- (78) huni(i)^ 'boat' [NJ húne '[id.]']
- (79) huni(i)^ 'bone' [NJ honé '[id.]']
- (80) huro(o)^ 'bath' [NJ huró '[id.]']
- (81) hwka(a)^ 'other' [NJ hoka^ '[id.]'; first-syllable vocalism does not agree; congruent accent is due to the irregularity of the Tokyo accent--cf. Narada hōka, which is regular (Martin, p.c.)]
- (82) hwsyi(i)^ 'piece of dried bonito' [NJ katuobusi^ '[id.]']
- (83) khadi(i)^ 'number' [NJ kázu '[id.]']
- (84) khage(e)^ 'shadow' [NJ káge '[id.]']
- (85) khagi(i)^ 'key' [NJ kagi '[id.]'; corrected from khagi(i)^ (Martin, p.c.)]
- (86) khama(a)^ 'sickle' [NJ káma '[id.]']
- (87) khami(i)^ 'jug' [NJ kamé '[id.]']
- (88) khami(i)^ 'tortoise' [NJ káme '[id.]']
- (89) khasi(i)^ 'dregs' [NJ kásu '[id.]']

- (90) khata(a)^ 'shoulder' [NJ káta '[id.]']
- (91) khsa(a)^ 'grass' [NJ kusá '[id.]']
- (92) khsu(u)^ 'manure' [NJ kusó '[id.]']
- (93) khtyi(i)^ 'east' [NJ kóti 'east wind'; Martin (p.c.) has corrected this from khti(i)^; the form must be reconstructed as *kuti because the vowel is not voiced--pre-Sd *kotí^ would have resulted in x khutyi(i)^]
- (94) khumi(i)^ 'rice' [NJ komé '[id.]']
- (95) kuda(a)^ 'tube, pipe' [NJ kúda '[id.]']
- (96) kuma(a)^ 'bear' [NJ kumá '[id.]']
- (97) kumo(o)^ 'cloud' [NJ kúmo '[id.]']
- (98) kura(a)^ 'a godown (storehouse)' [NJ kurá '[id.]']
- (99) kyimyi(i)^ 'millet' [NJ kíbi '[id.]']
- (100) kyinyu(u)^ 'yesterday' [NJ kinóo '[id.]']
- (101) mado(o)^ 'opening, leisure; window' [NJ mádo 'window'; mádoka 'round; tranquil']
- (102) maga(a)^ 'grandson' [NJ magó 'grandchild']
- (103) mami(i)^ 'pea' [NJ mamé '[id.]']
- (104) maru(u)^ 'ball' [NJ marí '[id.]', maru^ 'circle'; perhaps the back vocalism of a related Sd word for 'circle' was adopted in Sd in response to the introduction of the word maryi(i)^ (below) in the meaning 'buttocks', from whatever source; see below]
- (105) maryi(i)^ 'buttocks' [is NJ marí 'ball' related? This Sd word may instead be related to an old Japanese word meaning 'excrete', maru. In any case, it may well have forced a segmental change in the word for 'ball', above.]

- (106) masyu(u)^ 'salt' [NJ sió '[id.]'; the Sd word apparently originally meant 'true salt', ma+syu(u)^.]
- (107) mayo(o)^ 'eyebrow' [NJ máyu '[id.]']
- (108) mugyi(i)^ 'wheat' [NJ múgi 'barley, wheat, oats, rye']
- (109) muho(o)^ 'son-in-law' [NJ múko '[id.]']
- (110) mumo(o)^ 'thigh' [NJ mómo '[id.]']
- (111) muru(u)^ 'all' [NJ moromoro^ 'various; all (sorts of)'; there is also Sd mur#.. meaning 'total#..', as in Sd-SJ mur#sonU B 'total loss']
- (112) mutyi(i)^ 'rice cake' [NJ moti^ '[id.]']
- (113) myimyi(i)^ 'ear' [NJ mimí '[id.]']
- (114) myinya(a)^ 'shell' [NJ niná]
- (115) myinyo(o)^ 'straw raincape' [NJ míno '[id.]']
- (116) myisyi(i)^ 'cooked rice' [NJ mesí '[id.]']
- (117) myisyi(i)^ 'shop' [NJ misé '[id.]']
- (118) myithya(a)^ 'earth' [No obvious NJ cognate, except possibly for the name Mita]
- (119) nabi(i)^ 'pan' [NJ nábe '[id.]']
- (120) nama(a)^ 'raw' [NJ náma '[id.]'; apparently an adjectival noun]
- (121) namyi(i)^ 'wave' [NJ namí '[id.]']
- (122) nigyi(i)^ 'onion' [NJ négi '[id.]']
- (123) nubi(i)^ 'throat' [No obvious NJ cognate]
- (124) numyi(i)^ 'flea' [NJ nomí '[id.]']
- (125) nuryi(i)^ 'kind of seaweed' [NJ norí 'laver; sloke']
- (126) nuryi(i)^ 'starch' [NJ norí '[id.]']
- (127) nusyi(i)^ 'master' [NJ núsi '[id.]']

- (128) qakyi(i)^ 'autumn' [NJ áki '[id.]']
- (129) qami(i)^ 'rain' [NJ áme '[id.]']
- (130) qamu(u)^ 'old woman' [No obvious NJ cognate; OJ dialectal am''o
'mother']
- (131) qasye(e)^ 'old woman [term of address used by women]; mother [=
kháásan(u)]' [No obvious NJ cognate]
- (132) qawa(a)^ 'bubble' [= buku(u)^; NJ awá '[id.]'; Martin (p.c.)
believes the published quwa(a)^ is a transcriptional error]
- (133) qawe(e)^ 'time left' [NJ awai]
- (134) qubi(i)^ 'woman's sash; hoop' [NJ obi; Martin 1970:118 has
misprint pubi(i)^ (Martin, p.c.)]
- (135) qukyi(i)^ 'offshore' [NJ oki^ '[id.]'; NJ atonic is irregular--see
Hiroshima okí (Martin, p.c.)]
- (136) quma(a)^ 'horse' [NJ umá '[id.]']
- (137) qumyi(i)^ 'sea' [NJ úmi '[id.]']
- (138) qunyi(i)^ 'devil' [NJ oní '[id.]']
- (139) qura(a)^ 'back; lining' [NJ urá '[id.]']
- (140) qusi(i)^ 'mortar' [NJ úsu '[id.]']
- (141) qusyu(u)^ 'tide' [NJ usio^ '[id.]'; Tokyo, Kyoto atonic is
irregular--Narada usió (Martin, p.c.)]
- (142) quya(a)^ 'parent' [NJ oyá '[id.]']
- (143) qyibu(u)^ 'kind of fish' [No obvious NJ cognate]
- (144) qyikhyi(i)^ 'pond' [corrected from qyikhi(i)^; see Martin
1970:104b; NJ iké '[id.]']
- (145) qyiky(i)^ 'breath' [NJ íki '[id.]']
- (146) qyimi(i)^ 'dream' [OJ ime, yume; NJ yumé '[id.]']

- (147) qyinyi(i)^ 'rice plant' [NJ íne '[id.]']
- (148) qyiryu(u)^ 'color' [NJ iró '[id.]']
- (149) qyithyu(u)^ 'silk' [= kyinu(u)^ (see loan list for qyitho(o)^); NJ íto 'thread']
- (150) sabyi(i)^ 'rust' [NJ sabí '[id.]']
- (151) saru(u)^ 'monkey' [NJ sáru '[id.]']
- (152) saya(a)^ 'sheath' [NJ sáya '[id.]']
- (153) siba(a)^ / ?suba(a)^ 'lips' [there is a south Kyushu form suba; in Kikai the cognate means 'tongue', and in Shuri, 'lips' (all above, Martin, p.c.)]
- (154) sidyi(i)^ 'line, fiber' [NJ súzi 'muscle; vein; fiber; line; etc.']
- (155) sigyi(i)^ 'cedar' [NJ sugi^ '[id.]']
- (156) simyi(i)^ 'ink; charcoal' [NJ sumí '[id.]' (but the two NJ meanings are written with different characters)]
- (157) stu(u)^ 'outside' [NJ sóto '[id.]', attested only since the Muromachi period (14th through 16th centuries; Martin, p.c.); unless there is an unrecorded sutu(u)^ within Shodon itself, this word must be reconstructed as *suto^; Shuri has sutu B, suggesting that pR *soto B is correct; another possibility is that this stu(u)^ is similar to sta(a) 'sugar'; the latter has come from *sata(a), and we know it is not a phantom form, because it is independently attested as sIta (undoubtedly with devoiced I) in Koniya by Hirayama et al. The idea is that, at least with initial *s, the first of two identical (nonhigh) vowels got either deleted

or raised and devoiced (it is impossible to discriminate between the two possibilities in initial position for words beginning with s).]

- (158) suba(a)^ '(be)side' [NJ sóba '[id.]']
- (159) syiba(a)^ 'firewood' [NJ siba^/síba '[id.]', with the first accent variant an irregular correspondence to other Tokyo-type dialects (Martin, p.c.)]
- (160) syima(a)^ 'island; native place; inhabited place' [NJ simá 'island']
- (161) syiru(u)^ 'juice' [NJ síru '[id.]']
- (162) syisyi(i)^ 'meat, flesh' [= nyiku(u)^ (see loan list); NJ sísi 'flesh']
- (163) thama(a)^ 'ball' [NJ tamá '[id.]']
- (164) thani(i)^ 'seed' [NJ táne '[id.]']
- (165) thida(a)^ 'sun' [No obvious NJ cognate; some claim the word is related to SJ téntoo 'Providence; Heaven']
- (166) thkyi(i)^ 'moon' [NJ tukí '[id.]']
- (167) thoho(o)^ 'octopus' [NJ táko '[id.]']
- (168) thtyi(i)^ 'mallet, hammer' [NJ tutí '[id.]']
- (169) thusyi(i)^ 'year; age' [NJ tosí '[id.]']
- (170) tibu(u)^ 'grain; drop' [NJ túbu '[id.]']
- (171) tidi(i)^ 'saliva' [No standard J cognate]
- (172) tímyi(i)^ 'sin' [NJ túmi '[id.]']
- (173) tíno(o)^ 'horn' [NJ tunó '[id.]']
- (174) tíra(a)^ 'face' [= khaó(o) (see loan list); NJ turá '[id.]']
- (175) waku(u)^ 'frame' [also wak(u)' (loan); NJ wakú '[id.]']

- (176) wara(a)^ 'straw' [NJ wára '[id.]]'
- (177) wihi(i)^ 'bucket' [NJ óke '[id.]]'
- (178) wugyi(i)^ 'sugar cane' [NJ ógi 'a common reed']
- (179) yado(o)^ 'door' [NJ yádo 'dwelling; lodgings; my husband']
- (180) yama(a)^ 'bamboo clump' [No obvious cognate, unless related to yama(a)^ 'mountain'; mountains and hills in Amami often have sacred groves at their peaks, so this is a possible metonymic extension of 'mountain'.]
- (181) yama(a)^ 'mountain' [NJ yamá '[id.]]'
- (182) yiri(i)^ 'collar' [NJ erí '[id.]]'; there has been metathesis in the Shodon form--see yudi(i)^ in the loan section for details]
- (183) yudu(u)^ 'bait' [Perhaps cognate with NJ esa^ '[id.]]']
- (184) yuru(u)^ 'night' [NJ yóru '[id.]]']

CLASS (7b): TOP-HEAVY EXPANSIVE DISSYLLABLES (CVCCV(V))

In the word-subclass CVCCV(V) of (7b) there are mostly loans and compounds. The only tonic item is kyíń'yo(o) 'Friday' (an SJ compound), corrected by Martin (personal communication) from his 1970 kíńyo(o) 'yesterday'. (Elsewhere in Martin 1970 (117b), 'yesterday' is kyinyu(u)^.) Of the atonics, three are Sino-Japanese loans, and of the remainder, one is a compound:

yamme(e)^ 'garden' <- yaa^~n#me(e)~, literally, 'house's front',

and one is a Japanese loan:

qukka(a)^ 'mother';

the remaining item may be a loan from Shuri qammaa^ 'mother':

qamma(a)^ 'mother/grandmother'.

BIBLIOGRAPHY

- Amami 2. See Kyûgakkai Rengô Amami Chôsa Inkai, eds.
- Hattori Shirô. 1954. "'Gengo nendaigaku' sunawachi 'goi tôkeigaku' no hôhō ni tsuite: Nihon sogo no nendai" [On the method of 'glottochronology', i.e., 'lexicostatistics': the date of proto-Japanese]. Gengo kenkyû 26/27:29-77.
- . 1955. "Okinawa hôgen no gengo nendaigakuteki kenkyû" ["A glottochronological study on three Okinawan dialects"]. Minzokugaku kenkyû 19.2(Sept.):142-151[36-45].
- . 1959 [1932]. "'Ryûkyûgo' to 'kokugo' to no on'in hôsoku" [Rules of phonological correspondence between 'Ryukyuan' and 'Japanese']. In Hattori 1959:296-361.
- . 1959 [1948]. "Nihongo to Ryûkyûgo, Chôsengo, Arutaigo to no shinzoku kankei" [The genetic relationship between Japanese and Ryukyuan, Korean, and Altaic]. In Hattori 1959:20-63.
- . 1959 [1958]. "Amami guntô no shohôgen ni tsuite: Okinawa, Sakishima shohôgen to no hikaku" [On the dialects of the Amami islands: a comparison with the dialects of Okinawa and Sakishima].] In Hattori 1959, 275-294.
- . 1959. Nihongo no keitô [The lineage of the Japanese language]. Tokyo: Iwanami Shoten.
- . 1960. "Amami Oshima Shodon hôgen no dôshi, keiyôshi shûshikei no igiso" [The sememe of the conclusive form of the verb and adjective of Shodon dialect of Amami Oshima]. In Gengogaku no hôhō, 401-412. Tokyo: Iwanami Shoten.
- . 1976. "Ryûkyû hôgen to hondo hôgen" [The Ryukyu dialects and the mainland dialects]. In Iha Fuyû Seitan Hyakunen Kinenkai, eds., Okinawagaku no reimei [The dawning of Okinawan studies], 7-55. Tokyo: Okinawa Bunka Kyôkai.
- . 1977. "Ryûkyû hôgen dôshi 'shûshikei' no tsûjiteki henka" [Diachronic changes in the 'conclusive form' of Ryukyu dialect verbs]. Gengo kenkyû 72:19-28.
- . 1978-1979. "Nihon sogo ni tsuite" [On proto-Japanese]. Gekkan gengo [Language monthly] (22 articles).

- . 1979. "Ryūkyū gogen jiten no kōsō" [The concept of a Ryukyuan etymological dictionary]. Okinawa bunka kenkyū, 1-54.
- Hattori Shirō, Uemura Yukio, and Tokugawa Munemasa. 1959A. "Amami shotō no sho-hōgen" [The dialects of the Amami islands]. Amami: shizen to bunka, ronbun-hen [Amami: nature and culture, articles volume], 403-432. Tokyo: Nihon Gakujutsu Shinkōkai.
- . 1959B. "Amami shotō shohōgen no gongenendaigakuteki chōsa" [A glottochronological investigation of the dialects of the Amami islands]. Amami: shizen to bunka, ronbun-hen [Amami: nature and culture, articles volume], 433-464. Tokyo: Nihon Gakujutsu Shinkōkai.
- Hirayama Teruo, Oshima Ichirō, and Nakamoto Masachie. 1966. Ryūkyū hōgen no sōgōteki kenkyū [A comprehensive study of the Ryukyuan dialects]. Tokyo: Meiji Shoin.
- HUT. See Hattori, Uemura, and Tokugawa.
- JDB. See Omodaka Hisataka et al., eds.
- Jeffers, Robert J., and Ilse Lehiste. 1979. Principles and methods for historical linguistics. Cambridge: The MIT Press.
- Kagoshima[-ken Shiritsu] Kyōikukai, eds. 1975 [1906]. Kagoshima hōgen shū [Collection of Kagoshima dialect words]. Tokyo: Kokusho Kankōkai (Original publisher: Kagoshima: Kyūei Kinkōdō.)
- Kanehisa Tadashi. 1963. Amami ni ikiru Nihon kodai bunka [Japan's ancient culture, still alive in Amami]. Tokyo: Tōkō Shoin.
- KHS. See Kagoshima[-ken Shiritsu] Kyōikukai, eds.
- KJE. See Shinmura Izuru, ed.
- Kokuritsu Kokugo Kenkyūjo [National Language Research Institute], eds. 1963. Okinawa-go jiten [Dictionary of Okinawan]. Tokyo: Okurashō Insatsukyoku.
- Kyūgakkai Rengō Amami Chōsa Iinkai, [The Union of Nine Learned Societies, Committee to Investigate the Amami Islands], eds. 1982. Amami: shizen, bunka, shakai [Amami: nature, culture, and society]. Tokyo: Kōbundō.
- Martin, Samuel E. 1970. "Shodon: A dialect of the northern Ryukyus." Journal of the American Oriental Society 90.1:97-139.
- . 1980. "Earlier Japanese." Ms.
- . [n.d.] "Shodon-English lexicon." Ms.

- Matsumoto Hirotake. 1982. "Amami hōgen no dōshi katsuyō ni mirareru ichi-tokuchō: katsuyō no taipu to katsuyō taikai" ["A study of the conjugation paradigm of the verb in the Amami dialects"]. Amami 2 288-293.
- OGJ. See Kokuritsu Kokugo Kenkyūjo, eds.
- Omodaka Hisataka et al., eds. 1967. Jidaibetsu kokugo daijiten, jōdai hen [Periodized dictionary of Japanese: Old Japanese]. Tokyo: Sanseidō.
- SdELex. See Martin, [n.d.].
- Serafim, Leon A. 1977A. "Front vocalism and palatalization in the Omoro sōshi: the philological and modern dialectal evidence." Ms.
- . 1977B. "The relationship of pre-Japanese and proto-Japanese." Paper presented to the Symposium on Korean-Japanese Relationships, LSA Summer Meeting, Honolulu.
- Shimato Sadayoshi. 1935. Kagoshima hōgen jiten [Kagoshima dialect dictionary]. Kagoshima: Privately published.
- Shinmura Izuru, ed. 1975. Kōjien. Tokyo: Iwanami Shoten.
- Uemura Yukio. 1959. "Ryūkyū shohōgen ni okeru 'ichi-, ni-onsetsu meishi' no akusento no gaikan" [An overview of the accentuation of 'one- and two-syllable nouns' in the Ryukyuan dialects]. In Kotoba no kenkyū (Kokuritsu Kokugo Kenkyūjo Ronshū 1) [Studies of language (National Language Research Institute papers, vol. 1)], 121-140. Tokyo: Okurashō Insatsukyoku.
- . 1962. "Ryūkyū no hōgen" [The Ryukyu dialects]. In Kokugogakkai, ed., Hōgengaku gaisetsu [Outline of dialectology], revised and enlarged edition, 103-134. Tokyo: Musashino Shoin.