A PHONOLOGICAL SKETCH OF
MEDIEVAL JAPANESE

Richard L. Spear

Introduction

The purpose of the present essay is to describe the phonemic structure of late medieval Japanese as it is reflected in a specific text entitled Esopono Fabulas, dated 1593. As in any such attempt to reconstruct the phonological system of a dialect no longer spoken, the main thrust of the arguments will be to establish a transcription that will be most suited to the task of further grammatical description. The phoneme in such a description is defined as the minimal unit of that system that most accurately and efficiently maps the sounds of the language into the grammatical structure.

In 1593 the Jesuit Mission Press at Amakusa completed the printing of a volume containing three secular works.1 It was to be used as an introductory language text for the newly arrived priests at the college in Amakusa. Accordingly, it was written in Japanese, using Roman script. The first section of this work contained an abbreviated version of the Tales of the Heike, written in a narrative-colloquial style, the second a version of Aesop's Fables in colloquial Japanese, and the third, entitled the Quincuxu, a collection of proverbs from the Analects and other Chinese sources written in both the literary and colloquial styles. The full bibliographical details of this volume are to be found as entry 13 (9) in the Kirishitan Bunko (1957), edited by Father Johannes Laures, S. J. The second portion of this volume constitutes the corpus for the present phonemic description. On the title page it is given the Japanized Portuguese title Esopono Fabulas (The Fables of Aesop).2

---155---
The Jesuit Mission edition of the text contains seventy fables derived from various sources but traditionally attributed to the fifth century B.C. fabulist, Aesop. These seventy fables are preceded by a biography of Aesop. The first and most exhaustive effort to find the original version from which the Japanese version was translated was made by Ernest Mason Satow, the British scholar who reported in 1888 his discovery of the only extant copy of *Esopono Fabulas* at a bookshop in Nagasaki. In his bibliographic sketch of the Jesuit Mission Press he attempts to identify the *Fabulas* with a Latin version published in Paris by Robert Stephanus in 1545. Unfortunately, even the most diligent scholarship has been unable to determine with certainty the specific edition, of the numerous editions of the Fables, that served as the source for the Amakusa text.

In assessing the value of this work in the historical study of the Japanese language Kasuga Masaji has pointed out four important features. The Amakusa edition of Aesop is: (1) a clearly dated text, (2) written in the pure, colloquial style of the period (*jidai no junkogobun*), (3) in a dialect that was standard for the central region of Japan (*chūō hyōjungo*), and (4) written in Roman script. These features set the *Fabulas* apart from other texts of the late Muromachi period (e.g., the *shōmono* or *kyōgen* materials), and make it an extremely valuable document in the history of the language.

The following works have been of primary importance in this study. Among the orthoepic evidence, the most important are unquestionably Rodrigues' *Arte da Lingoa de Iapam* and the *Vocabulario da Lingoa de Japam*. Throughout this study frequent reference will be made to these works. In the modern period the earliest examination and description of the sound system reflected in the Christian materials was begun by Hashimoto Shinkichi in his study of the *Doctrina*. An excellent brief summary of this system is found in *Kokugo-shi yōsetsu* (1955) by Doi Tadao and Morita Takeshi. A more recent contribution to the study of the Muromachi sound system has been made by Ōtomo Shin'ichi who has reconstructed from Chinese and Korean materials a
phonetic system very close to the one resulting from my examination of
the Christian materials. To these must be added the most recent
scholarship of Yanagida Seiji,9 whose use of the shōmono material in the
analysis of allophonic varients has given new insights into many long
standing questions, and Morita Takeshi,10 who builds upon an even
broader range of phonetic material to amass data invaluable to any
phonetic interpretation. In 1960 the last fully annotated edition of the
transliterated text appeared. It was prepared by Shinmura Izuru and
Hiragi Gen'ichi as volume 94 of the Nihon koten zensho (Kirishitan
bungakushū, II). This work is the most helpful edition available and has
served in this analysis as the highest authority in problems of textual
interpretation.

For the purposes of this analysis, let us postulate the phoneme and
define it as the smallest unit of grammar. Its function is to discriminate
between linguistically different sequences within morphological units.
Thus two concatenations of phonemes having different members consti-
tute two different elements provided that the morphophonemic rules of
the language do not specify a change in the phonemic inventory of that
element under statable conditions. Phonological elements whose occur-
rence in a sequence are always conditioned, and therefore have no
function in the system beyond that which could be signalled by a
phoneme, are said to be allophones. They are part of the phonetic
inventory but not part of the grammar as a functional system.

In this analysis of the transcription established by the Mission Press
three additional transcriptional systems are employed. In the order in
which they are encountered, they are as follows. (1) A modified Hepburn
romanization (as specified by the Library of Congress) is used to record
all Japanese names (e.g., Shinmura Izuru) and titles (e.g., Kirishitan
bungenkō 'Thoughts on the Christian Literature') as well as any tran-
scriptions of the modern language other than those specifically offering
phonetic information. All such citations, except for proper names, will
be italicized. This choice is made first to facilitate the finding of
references in most library catalogs and further to avoid introducing yet
other transcriptions into the presentation. (2) A *broad phonetic* transcription is used to record the raw-phonetic values given to the material of the corpus. These elements are in square brackets (e.g., [wōmo:te] 'thinking'). (3) A *phonemic* transcription is used in all other discussions of the phonological system on the grammatical level. Its forms are placed between slant lines (e.g., /omoute/). The establishment of this system is the purpose of this paper. The writing found in the corpus itself is referred to as the *script*. It is italicized throughout (e.g., vomōte).

The analysis presented here begins with a description of the script used in the text and a tentative statement (in broad phonetic transcription) of the phones they represent. Following this we shall examine the phonemes that may be postulated to account for those phones. The paper concludes with a summary of the system which emerges from the analysis. In Appendix I a sample text will be presented, giving the Jesuit script, its reconstructed phonetic form, and a phonemic transcription, together with a translation. A set of charts, showing the relationship between the *kana* syllabary, the Jesuit script, and the phonemic transcription, will conclude the appended material.

**The Script**

The graphs used in the script established by the Jesuit Mission Press may be divided into three broad groups.

The first are the *letters* representing what they took to be the 21 simple sounds of the language: A, B, C, D, E, F, G, H, I, M, N, O, P, Q, R, T, V, X, Y, and Z, with their lower case equivalents. The letters I, V, and S are the capitals for two graphs each. The I is used for both i and j, the V for v and u, and S for s and f. The form s has a very limited scope in the corpus since in the European orthographic tradition it occurs only in word final position. There are however several unsystematic uses of this graph in the text (cf. *fiscō* 'treasure' ⟨21.9⟩, for the regular *fiscō* ⟨97.12⟩). One unaccountable spelling is *sōmocu* 'vegetation' which in all three of its occurrences ⟨15.1, 15.17, and 30.5⟩ begins with the graph s. Throughout this essay each f' will be written s for typo-graphical
simplicity. The second group of graphs are the diacritics. They are \( \text{ṣ} \), \( \text{ṭ} \), the cedilla, and the tilde. The first two are marks devised for the language by the editors to account for a set of vowel distinctions which will be treated below in the discussion of the vowel phones. The cedilla occurs under the ç and is limited to the sequence -ṭçu-, as in qitçune [kitsūne] 'fox'.\(^13\) The tilde has in this text the function of an abbreviation. It is used as an unpredictable variant of the letter n in both Sino-Japanese words (e.g., cônicî 'today' \( \langle 18.3 \rangle \) — with seven other examples spelled connicî) and in native words (e.g., nāgi 'you' \( \langle 54.21 \rangle \) contrasted with 29 other occurrences of nangi).\(^14\) The only pattern that can be found in the use of the tilde is its frequent occurrence near the end of lines, a fact that suggests that the typesetter used it as a convenient means to justify his lines.

The third group are the marks of punctuation. They are seven in number. The period, the question mark, and the exclamation point have functions parallel to European usage. The colon serves as a mark for a full stop (period) within quoted material of more than one sentence and as an indication that a quote is beginning (as after the set expression carega yūua: 'he says,'). The semicolon is an infrequent variant of the colon. The comma indicates a grammatical or, less frequently, an elocutionary, juncture. The dash is used irregularly to indicate that the word is continued on to the next line. In a most general way, the punctuation marks, except the last, have junctural values which will be presented within the phonemic description.

### The Phones

(Vowels)

There are eight letters which represent the vowel sounds of the corpus. They are \( a, e, i, j, y, o, u, \) and \( v \). The five graphs \( a, e, i, o, \) and \( u \) may be isolated out as those which indicate the primary vowel phones of the language:
These phones may be safely reconstructed as being not substantially different from those in the modern standard. The graphs that are found in the text are those used to represent the primary vowels in most modern transcriptions of the same lexical items. Each of these phones, when followed by voiced stops, fricatives, affricates or nasals are referred to as the nasalized variants and will be discussed below.

The letters $j$ and $y$, aside from functioning as a consonant and a semi-vowel, serve as allographs of $i$, with the value of [i]. Their distribution is conditioned, albeit irregularly, by a series of factors determined by Japanese orthography and the desire of the editors to supply the script with additional morphological information. The $j$ in general represents the second of two [i]'s in a native Japanese lexical item. Thus the termination -majij [mäžii] ‘will not’, the non-past indicative adjective forms with [i] stems (e.g., vtçucuxij [utsukušii] ‘is beautiful’) and sequences which result from contraction (e.g., qiбережte [kiite] ‘hearing’) all have as a rule $j$. The $y$ is used in most Sino-Japanese items to indicate [i] when it stands initially in a syllable. Thus we find yxa [iša] ‘doctor’, yν [iṇ] ‘seal’, ychi [itši] ‘one’ (contrasted with the native form ichi [itši] ‘market’) and fony [fōni] ‘one’s intention’. It is also used quite irregularly used to write native verbs beginning with [i] (e.g., yte [ište] ‘going’) and regularly to spell the infinitive of the verb to speak (y [i]). The $y$ has the further function of spelling words such as taguy [tāguı] ‘sort’, where the sequence *tagui would be pronounced *[tāgi] (the $u$ serving as a transcriptional device to indicate the stopped quality of $g$). These rules find numerous exceptions in the text, e.g., chijn [tšiņ] ‘friend’ and ichinin [itšinin] ‘one (of persons)’ where a $y$ is expected, and yuware [iware] ‘reason’ and jnu [inu] ‘dog’ where an $i$ is expected. It is evident that the selection of $i$, $j$, or $y$ on the part of the editors had some basis in distinc-
tions, either phonological or morphological, felt to exist in the language at the time of the transcription of the corpus. However, whatever these distinctions may have been, the inconsistency of their description gives a clear indication that the system in which they were operating was at that period breaking down.

The letter \(v\), besides its function as the semivowel \([w]\), is a variant of \(u\) when it stands initially in a syllable. Thus with regularity we find \(vma\) [ūma] 'horse', \(yamauxi\) [jāmauxi] 'mountain ox', and \(vujo\) [uwo] 'fish' (where the \(u\) is the intervocalic graph for \([w]\)).

In its broadest form the distribution of \(y\), \(v\), and \(j\) as spellings for vowel phones can be stated in the following way. The \(y\) and \(v\) are allographs of \(i\) and \(u\) in syllables without initial consonants, and \(j\) is the graph for \(i\) after \(i\) in native words, except for \(iy\) [ii] 'to say'.

The use of the graph \(u\) as a transcriptional device to indicate the stop quality of \(g\) before \(i\) and \(e\) is consistent throughout (e.g., \(guι\) [\(gi\]) 'reason', and \(cague\) [kāge] 'shadow'). This usage of \(u\) is carried over also to the palatal syllables since the letter \(i\) was used for the post-consonantal semivowel \([j]\). Thus:

\[
\begin{align*}
gui= & [gja] \\
gui= & [gju] \\
gui= & [gjo]
\end{align*}
\]

Before \(a\), after the consonants \(q\) and \(g\), the \(u\) has the value, as in Portuguese, of the semivowel \([w]\). Thus:

\[
\begin{align*}
qu= & [kwa] \\
gua= & [gwa]
\end{align*}
\]

Two graphs from the second group of symbols are involved in the spelling of the vowel phones. These are the diacritical marks \(\hat{\cdot}\) and \(\check{\cdot}\). The first occurs over \(o\) and \(u\) while the latter only over \(o\). The values of these elements have been reconstructed (by Hashimoto, Doi, et al.) and generally accepted as being:}

---161---
\[ \delta = [\omega:] \]
\[ \delta = [\alpha:] \]
\[ \tilde{u} = [\text{u:}] \]

The first represents a phonetically long, open, low back vowel (known in Japanese historical phonology as *kaion*) ‘open sound’, and the second is its closed counterpart (known as *gōon*) ‘closed sound’. The last is a long high (unrounded) back phone. There is, however, some inconsistency in the use of these graphs. The \( \delta \) gives evidence of being a spelling for the sequence [on]. This both in Chinese borrowings (with no examples in the text) and in such spellings as *nozōde* \( \langle 41.11 \rangle \) where elsewhere one finds *nozonde* [nōzōnde] ‘facing on’. Further, there was during this period the use of double vowels in Portuguese orthography (which these marks seem to suggest) to represent nasalization. This makes it tempting to reconstruct *nozōde* as [nōzōnde] and give the ambiguous values [\( \tilde{\alpha} : \)] or [\( \text{on} \)] to \( \delta \). The problem exists also for the \( \delta \). The spelling of the Sinic verb form *gorōjērarete* \( \langle 41.3 \rangle \) for what is elsewhere *go-ranjerarete* [goranzerarete] ‘looking (honorably)’ \( \langle 36.13 \rangle \) and the spelling *varōbe* \( \langle 40.14 \rangle \) for what is spelled *varambe* [warāmbe] ‘young boy’ in eight other occurrences, suggests that \( \delta \) was used for both the long vowel and the vowel followed by the nasal phone.

All the above examples, however, are found in environments that would condition nasalization in any event—before one of the nasalizing consonants, (i.e., the voiced stops, fricatives, affricates, or nasals). Thus the question arises: do the spellings with the diacritical marks reflect the presence of a clear nasal phone or are they by their position subject to a degree of nasalization which might better be described as conditioned by the following consonants? Realizing that in all likelihood the sound system itself was unstable at this point, and that the distinction between the sequence [\( \tilde{\omega} : \)] and [\( \text{on} \)], [\( \tilde{\alpha} : \)] and [\( \text{an} \)], or [\( \tilde{\text{u}} : \)] and [\( \text{un} \)] is not great, we must conclude that the editors of the text did not have a precise picture of the phonological situation confronting them. Their frequent alternative spellings, even with the help of traditional orthography, could well
have resulted from this inability to distinguish a nasal consonant from a nasalized vowel.

Certainly with the ā [ūː] forms the nasalization was the most clear. This is substantiated by morphological data which shows that of the verb stems ending in the phone [m] (e.g., [nôm] 'to drink', [kizâm] 'to chop', [tsûm] 'to pole up'), the forms in [ûm] are rather consistently, but not always, in the past tense spelled with un (e.g., tûnda [tsûnda] 'piled up'). The forms with [ôm] and [âm] ending stems are spelled, again not always, with a diacritic (e.g., nôda [nô:da] 'drank' and qizôda [kizô:da] 'chopped'). In reconstructing [tsû:da] for the past tense of the verb [tsûm] I am placing the emphasis on the general pattern. While accepting a value close to [nda] than for [ûm], [âm] and [ôn] ending stems, I would not treat the [n] as a consonant phone. On the basis of the data, we may make the generalization that all long vowels before the nasalizing consonants have a value which is between [~ː] and [n], inclining toward [n], but systematically are best recorded as [~ː].

The presence of the spelling sô for the Chinese borrowing meaning 'left and right' (as in the idiom sô naku [sô: naku] 'without reason') suggests that such sequences as the distinct diphthong [au] were not present in the system.

| CHART I |
|-----------------|-----------------|-----------------|
| **Short Vowels** | **High, front** | **Low, front** |
| [i]=i | qitçane | [kitsûne] | 'fox' |
| =y* | ytta | [îtta] | 'went' |
| =j** | ataraxj | [atarasî:] | 'newt' |
| " back | [u]=u | tçaru | [tsuru] | 'crane' |
| =v* | uxi | [uši] | 'ox' |
| " back | [e]=e | core | [kore] | 'this' |
| " mid | [a]=a | machi | [matši] | 'town' |

* These variants are used with some regularity in the syllable initial position.  
** This variant occurs regularly as the second of two [i]'s, conf., qijte [kiite] 'hearing' (19. 15).
<table>
<thead>
<tr>
<th>High, Back</th>
<th>Low, Back, Close</th>
<th>Low, Back, Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>[u:] = ū</td>
<td>[o:] = ō</td>
<td>[o:] = ō</td>
</tr>
<tr>
<td>taifu</td>
<td>vocame</td>
<td>dōri</td>
</tr>
<tr>
<td>‘typhoon’</td>
<td>‘wolf’</td>
<td>‘reason’</td>
</tr>
</tbody>
</table>

[ : ] vocalic length, [ ‿ ] palatalization, [ ] consonantal length, [ ~ ] nasalization

Each of these phones has a nasalized variant before the nasalizing consonants, i.e., the voiced stops [b], [d], and [g], the fricatives [z] and [ʐ], the affricates [dz] and [dʐ], and the nasals [m] and [n] together with their long variants. In these charts this feature is indicated by the term “nasalized” after the allophone.

In Chart I the reconstructed vowel phones for the text are presented with the graphs used for them by the editors of the Fables. Following Yanagida, the location of these phones can be plotted thus:

![Diagram of vowel phones](image)

(Consonants)

Among the consonants the stops are represented by the graphs p, b, t, d, c, g, and q. The q is an allograph of c (phonetically [k]) when occurring before e and i. These graphs represent two varieties of voiceless stop phones each. Before vowels they have a value quite like their modern equivalents [p], [t], and [k]. Before homorganic consonants they appear to have a distinct, unreleased variant. The result is a consonant followed, without release, by its rearticulation (e.g., yppiqi [iπ-piki] ‘one (of animals)’, yitta [iṭta] ‘went’, and roccon [roḵkōn] ‘the six senses’). The unreleased quality of the initial consonant is marked here by a sub-script dot (e.g., [aṭta] ‘was’). This phonetic interpretation is
reconstructed from the modern forms of Japanese.

There are in the spellings of this material occurrences of final \( t \) which present a problem in phonotactics (e.g., \textit{funbet} for what in the modern language is \textit{funbetsu} 'judgement'). This violates the general rule for open syllables, and has thus generated no small amount of speculation concerning the phonetic value of such items during the Muromachi period.\(^{22}\)

The problem revolves around those morphemes which had been borrowed into the language from Chinese and in their original form terminated in a dental stop.\(^{23}\) It appears that during the period of the corpus the phonological system of spoken Japanese recorded by the Jesuits was so constructed as to maintain a distinction between elements that the orthography did not distinguish (e.g., \textit{mot}, a Sinic morpheme for 'thing' and the native verb form \textit{mot}ç\( \grave{a} \) 'to hold', both of which would be written \( \text{ｂ} \text{つ} \)).\(^{24}\)

Since the distinctiveness of this phenomenon has never gone unnoticed in any orthoepic evidence, and since the traditional orthography has the symbol \( \text{つ} \) for forms that in the corpus end in \( t \), this graph when in the final position is considered to be phonetically similar to the same graph when used in gemination. The possibility that this spelling with \( t \) is a device within the script to signal an implosive sound such as that found in traditional \textit{nō} chanting is more than offset by the fact that such a keen ear as that of Rodrigues' heard and recorded it only as \( t \), without further comment.\(^{25}\) Thus it is reconstructed here as [\( \text{チ} \)] (e.g., \textit{xinset} [\( \text{sīṇšçt} \)] 'kindness'). Since Sino-Japanese elements may also appear initially in a compound word, it is not surprising to find such spellings as \textit{xutgin} [\( \text{suṭdžiŋ} \)] 'the going into battle' \(^{74.24}\). Finally, we must note that \( c \) is the spelling for [\( t \)] before \( ch \) [\( ts \)] as in \textit{xicchin} [\( \text{sīṭšiŋ} \)] 'the seven treasures'. This representation is taken from Portuguese orthographic practice and reflects the traditional misrepresentation of palatals in the Latin script.

The voiced stops are represented by \( b, d, \) and \( g \). The letter \( g \) has two functions in the script: it serves as the velar [\( g \)] before \( a, u, o, \) and \( e, \) but
as [dʒ] before i (cf. the transcriptional use of u above). The remaining
two graphs serve for the labial and dental phones [b] and [d].

The medial [d] and [ɡ] are quite certainly characterized by a nasal-
ization of the preceding vowel. This phenomenon is noted by Rodrigues
(p. 637) and is reflected (though not in the corpus) by such frequent
European spellings of the period as Nangasaqui for Nagasaki.25 It is also
found in the phonology of contemporary Kyushu dialects.26 The evidence for [b] lacks a clear statement on the part of Rodrigues, who lists,
in the reference above, only d, dz, and ɡ. Collado, however, in his
grammar marks (with reasonable consistency) each of the vowels before
ɡ, d, and b as nasalized.27 The study by Ōtomo of Chinese lexical
materials leads him to reconstruct a nasal “initial glide” before [b].27 All
this, together with the example in the text of quanbun (27.22) for what
one would expect to be *quabun [kwābûn] ‘excess’, and no other evi-
dence to the contrary, there seems little reason to avoid the generaliza-
tion, based also upon systemic considerations, that all medial voiced
stops conditioned the nasalization of the preceding vowel.

The nasalization of medial [ɡ], which is reconstructed by Ōtomo as
[ŋɡ],28 might in fact be closer to the modern standard [n], but the text is
unable to throw any light on this problem.

Since the voiced stops do not have long variants, the full series may
be charted as follows:

\[
\begin{array}{ccc}
[p] & [t] & [k] \\
[p̥] & [t̥] & [k̥] \\
[b] & [d] & [ɡ] \\
\end{array}
\]

The graphs used for the nasals are m and n. Here, as with the stops,
the phones that they represent are of two sorts. The first we may call
the simple nasals. They occur before each vowel graph (initially or
medially) never before consonants and never finally, e.g., nani [nâni]
‘what’.29 The second set of phones represented by these letters are the
syllabic nasals [ŋ] and [n̥]. They occur only in morpheme final position,
either in Chinese loanwords (e.g., xin$xet$ [sĩn$še$] ‘kindness’), or in contracted forms of native verbs (e.g., xinda [sĩn$da$] ‘died’). The occurrence of [m] (restricted to positions before [m], [b], and [p]) is established on the orthoepic evidence of Rodrigues 〈p. 231〉 and in the spellings in his work (e.g., memmen [mẽ$mmẽ$] ‘each one’). The text itself, unlike Rodrigues and the Vocabulario, supplies scant evidence to justify a labial syllabic nasal since the general rule of the script is to write such items as [mẽ$mmẽ$] as menmen, with the only use of the graph m in this function found in temma [tẽ$mma$] ‘demon’ 〈34.27〉 and eight occurrences of varambe [war$ămbe$] ‘young boy’.$^30$ It is probable that the editors of the corpus were making an effort, given up in the later works, to “phonemicize” the spellings of the syllabic nasals.

The Mission Press was never thoroughly successful in its efforts to differentiate between the simple and syllabic nasals in its script. When a Sino-Japanese compound had its first morpheme ending in a syllabic nasal and the second beginning with a vowel, the editors were only partially able to “spell out” the proper sequence of phones. With items having the second element in [i] they used y (e.g., fony [fony] ‘one’s intention’ 〈02.18〉), with [u] they used v (e.g., vonumaya [wŏ$n$umaya] ‘(honorable) stable’ 〈40.1〉). (since both [o] and [e] never occur initially in a morpheme they did not figure into the problem.) However, with [a] the spelling failed to give a clear picture of the phonetic values involved. The item jenacu ‘good and evil’ 〈16.7〉 could be pronounced either [zẽ$naku$] or [zẽ$paku$]. Only a knowledge of the morphology enables the reader to select the second as correct. (There are no minimal pairs in the text comparable to what Kenkyusha would transcribe as bun’an ‘a rough draft’ and bun$an$ ‘security’.)

The problem known in the Japanese phonological tradition as “connecting sounds” (renjō), so frequent in nō drama and characterized by such spellings as ten$no$ for the compound of the elements ten ‘heaven’ and ō ‘king’, is significantly not reflected in the text. Apparently this full rearticulation of the nasal phone after the syllabic nasal was not a general characteristic of colloquial speech, although as in the modern
language it seems reasonable to posit a degree of nasalization after the long nasal (e.g., fony [ˈɔnɪ] ‘one’s intention’). This minor degree of nasalization (one that may well be a universal phonetic phenomenon) has not been introduced into the broad phonetic notation used here.

In the light of this data it is possible to establish the following set of nasal phones:

\[
\begin{array}{ll}
[n] & [m] \\
[ŋ] & [ להש] \\
\end{array}
\]

The fricatives are represented by the graphs s, x, z, j, ç, and ŋ. The ç and ŋ are allophones of s. (As noted above s is used here to transcribe all items spelled with ŋ.) The s and z are the graphs for [s] and [z] (e.g., san [sâŋ] ‘three’ and nezumi [nêzûmi] ‘rat’). They are paralleled by a palatalized set, x and j, which are the graphs for [š] and [ž] (e.g., fuxin [fušîŋ] ‘doubt’ and naje [nâže] ‘why’). As with the stops and nasals there is a long variant of the unvoiced fricatives. Here, as with [ŋ] and [p], they occur only before homorganic consonants, as in amasaye [âmasaşaje] ‘besides’ and jixxi [zišši] ‘one’s real child’. Ōtomo, in his Muromachi-jidai no kenkyû (p. 701), reconstructs a nasal initial glide only for the voiced fricatives, a phenomenon reflected in this transcription.

In Portuguese, although each of the graphs s, z, x, and j (exclusive of those in gemination) is used in spelling the phonetic values assigned here, it should be noted that their distribution is somewhat different. The s, for example, although [s] initially or post-consonantally in Japanese, has the value of [z] intervocally in Portuguese. Such distinctions in usage have had no effect on the script of the Fabulas.

Thus the reconstruction of the fricatives is:

\[
\begin{array}{ll}
[s] & [š] \\
[ş] & [š] \\
[z] & [ž] \\
\end{array}
\]
The affricates are written with \textit{ch}, \textit{g}, \textit{tṣ}, and \textit{zz}. The digraph \textit{ch} has the value [tʃ] (as in \textit{chijn} [tʃiŋ] 'friend'). This is reconstructable from diacompative evidence, the pattering with the fricative series, and contact evidence which supplies the same spelling for the Portuguese sequence.\textsuperscript{32} The use of \textit{h} as a sign of palatalization has a parallel in the spelling \textit{nh} which has the value of [nj] (not as in Portuguese were it is [n]).\textsuperscript{33}

The \textit{g} here has the value of [dʒ], and is the voiced counterpart of \textit{ch}, (as in \textit{gique} [dʒiɡe] 'the common people'). This value is restricted to its occurrences before \textit{i}. (Its function as [g] has been described above.)

The \textit{tṣ} can be reconstructed from both diacompative and contact evidence as [ts] (e.g., \textit{tṣuma} [tsūma] 'wife'), with its voiced counterpart being \textit{zz}, phonetically [dz] (e.g., \textit{mizzu} [midzu] 'water').\textsuperscript{34} Both these clusters occur only before \textit{u}. Both of the voiced affricates have, in Ōtomo’s term, a "nasal initial glide." Rodrigues indicates this phenomenon with [dʒ] and [dz] when he reports that nasalization exists before the letters \textit{g} and \textit{d}. Interestingly, he may not have been fully aware of the phonetic implications of his rule since he uses \textit{g} for both [g] and [dʒ] in his trans literation.

The spelling for [ts] is interesting in the light of contemporaneous developments in Portuguese. The ‘ṣ’ had in the Middle Ages the value of [ts] which had begun to be confounded with [s] at least by the 14th century.\textsuperscript{35} There are, however, no clear data for the complete loss of dental quality of the phone. The fact that the editors find it necessary to place a \textit{t} before \textit{ṣ} when writing Japanese would suggest that in their native Portuguese speech ‘ṣ’ had by 1593 ceased to have a dental onset. The parallel loss in Portuguese of the [dz] value for ‘z’, which required the editors to use \textit{zz} for [dz] while allowing \textit{z} to serve for [z], further suggests that in the 16th century ‘ṣ’ and ‘z’, in early Portuguese pronounced [ts] and [dz], had already become [s] and [z].

On the basis of general patterning within the phonological system, there is every reason to assume that the above set of digraphs are unit phones and to reconstruct the affricate series as:
The spellings for the voiced affricates, g and zz, taken together with the voiced fricatives, j and z, are the rendering by the Mission Press of the consonants involved in a set of syllables known in Japanese philology as the *yotsugana* ('the four kana', i.e. ち [dʑi], づ [dzu], し [ʑi], and ず [zu]). As a result of their merger, the modern standard language now has ち and し pronounced [dʑi] while ず and づ have the value [zu]. It is an important feature of the *Fabulas* that these sequences are distinguished by the script in all but one example. The reconstruction [nezumi] 'rat' from 27 examples of the spelling *nezumi* is contradicted by two successive occurrences of *nezzumi* ⟨42.6 and .7⟩.

There is, however, reason to believe that the distinction between [dʑ] and [ʑ], spelled with g and j, was breaking down. As Morita shows, there is the tendency for confusion, even in the face of the usual procedure followed by the Jesuit Fathers of having their material written down in *kana* and then transliterating symbol by symbol. The fact that these two letters were confounded in Portuguese orthography during this period further militates against a precise reconstruction.

The *f* is reconstructed here as the labial aspirate [ɸ]. The use of *f* throughout the text as the consonant in the *ha* column of the syllabary, where today the phones of the standard language are [ha], [xi], [ɸu], [he], and [ho], suggests that those transcribing the language heard in all positions something close enough to the Portuguese [f] to so transcribe it. Collado's grammar of 1632 gives to the letter *f* a value as in Latin, but adds that in some districts of Japan it is pronounced in a manner between a bilabial [f] and [h]. Doi reports a riddle, attributed in 1516 to the Emperor Nara II, which is now famous in the history of the phonology. It runs (in modern transliteration) *Haha ni wa futatabi aitaredomo, chichi ni wa ichido mo awazu*, 'Although in mother (*haha*) they meet twice, in father (*chichi*) they do not meet even once'. The answer is *kuchibiru* 'the lips', with the riddle revolving around the pun on the
words ‘mother’ and ‘father’ and their being used for their phonetic values a well as their lexical meaning. The answer informs us that in the word ‘mother’ the lips meet twice, thus giving to it the phonetic value somewhere between [papa] and [ʃaʃa].

Since there is always present the desire of the editors to reflect the conservative, native orthography where possible, and since there is an absence of the phone [h] in Portuguese, the material does not, by the use of f, unquestionably prove the reconstruction [ʃ] throughout the ha column. However, the orthoepic evidence lays any other reconstruction open to even greater doubt.

The r is said by Rodrigues (p. 229) to be distinct from his native [r] which was, as Williams reconstructs, trilled. Collado, on page five of his grammar, says it is pronounced “smoothly and gently” (blandé & leniter). These two descriptions make it difficult to equate the sound with the modern flapped [ɾ]. Since the [r] in modern no chanting is a velarized lateral sound, and since a number of modern scholars such a Sakuma Kanae (significantly from Kyushu) give even the modern sound the value of [l], there seems little reason not to reconstruct the r as a velar, lateral, liquid [r], a quality not far removed from the sound in contemporary American pronunciation.

Chart II lists the consonant phones as reconstructed from the evidence presented by the Jesuit Fathers in their transliteration. The graphs in parentheses are those whose presence is necessary for the spelling to reflect the appropriate phonetic value.

The semivowels are [j] and [w]. They are spelled with h, y, i, e, u, and w. The h is used after n (e.g., nhóbó [njó:bo:] ‘wife’), and c (e.g., chichi [tʃitʃi] ‘father’) a usage reflected in the English spellings of the palatal sounds [ʃ] and [tʃ] with ‘sh’ and ‘ch’. The y occurs only in syllable initial position (e.g., yuye [juye] ‘reason’). A distinctive feature of medieval Japanese is the presence of an initial palatalization of the [e] syllable. This pronunciation continued into the late Tokugawa Period and is reflected in the English word ‘yen’ for the Japanese monetary unit. Elsewhere [j] is symbolized by either i (e.g., qioku [kjoku] ‘a melody’) or
<table>
<thead>
<tr>
<th>CHART II</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stops</strong></td>
</tr>
<tr>
<td>Unvoiced, Labial</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; Velar</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>Voiced, Labial</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
</tbody>
</table>

| **Fricatives** |
| Unvoiced, Alveo-dental | [ɕ]=s (s)* | issai [śśai] | 'the whole' |
| " " | [ɕ]=s (other) | sato [śato] | 'village' |
| " " | [ɕ]=x (x) | yxxo [śixo] | 'together' |
| " " | [ɕ]=x (e) | xemi [śemi] | 'cicada' |
| " " | =x (i) | xita [śita] | 'below' |
| Voiced, Alveo-dental | [z]=z (a, u, o) | za [za] | 'mat' |
| " " | [ʒ]=j (e) | naje [śaje] | 'why' |
| " " | =j (i) | fitcuj [śitsuji] | 'sheep' |

(e.g., reōji [röːjī] 'remedy'). The use of i or e for a semivowel after a consonant has no parallel in the Portuguese orthography. It seems rather to reflect the phonetic interpretation, of such sequences as [kjoku] above as having the value closer to [kioku], perhaps even a diphthong (cf. the early modern spelling Tokio).

The spelling of such sequences sometimes with i and sometimes with e (especially before phonetically long vowels) comes from two sources. First, as pointed out by Morita, there was the desire to represent the native orthography, which historically had kept distinct such sequences as れう, ancient [reu], and りう, anciently perhaps [rio:] (which had phonetically moved with [reu] toward [rjō:] at an earlier
### CHART II (continued)

#### Affricates

| Unvoiced, Alveo-dental | [ts]=tɕ (u) | tɕaru | [tsuru] | 'crane' |
| " Palatal | [tʃ]=ch (i) | chichi | [tʃiʃi] | 'father' |
| Voiced, Alveo-dental | [dz]=zз (u) | mizzu | [midzu] | 'water' |
| " Palatal | [dʒ]=g (i) | nangi | [nəŋdʒi] | 'you' |

#### Nasals

| Voiced, Alveo-dental | [n]=n (C)** | fënji | [fəŋzi] | 'answer' |
| " " " | =n (#) | tabun | [təbʊŋ] | 'perhaps' |
| " " " | [n]=n (V) | fune | [fʊne] | 'boat' |
| " Labial | [ŋ]=n (b)*** | funbet | [fʊŋbeŋ] | 'judgement' |
| " " | =n (p) | qinpen | [kinpęŋ] | 'neighborhood' |
| " " | =n (m) | banmin | [banmın] | 'the multitude' |
| " " | =m (m)*** | lemma | [tenma] | 'demon' |
| " " | [m]=m (V) | nami | [nəmi] | 'wave' |

#### Aspirates

| Unvoiced, Labial | [ɸ]=f (V) | fito | [ʃito] | 'man' |

#### Liquids

| Voiced, Velar | [ɾ]=ɾ (V) | vare | [ware] | 'r' |

[ :] vocalic length, [ . ] consonantal length, [ ' ] palatalization, [ # ] nasalization, [ ] juncture

* Regularly written ţ.
** May frequently be spelled with a tilda as in dëbacu [dëmbaku] 'field', and ningue [niŋgüe] 'human being'.
*** A rare spelling, *tənma would be more systematic.

This, coupled with the fact that in the Portuguese of the period the sequence 'eo' (as in the word for 'I') was pronounced with a high close [e], would tend to give either transcription a form that a Portuguese reader would have pronounced [ɾjoo:]. When reò and riò are compared with the spellings xo, jo and nhô, the pattern strongly suggests that the phenomenon being transcribed is palatalization with the semivowel [j].

When palatalization preceded the long vowels it added another complexity and presented a greater problem to the editors. The factors involved in the spelling of such forms were: (1) the editors' lack of
consistency with respect to the spelling of even simple palatalization (spelling it sometimes with letters which included the palatalization, as in xita [ʃita] 'below'; sometimes with consonants, as in nhòbō [ŋjo:bo:] 'wife'; and sometimes with a vowel, as in qiocu [kjoku] 'a melody'); (2) the degree of complexity intrinsic in the language with respect to palatalization and vocalic length, which as we shall observe in the discussion of the vowel phonemes below was the result of several factors within the phonological structure (such as the adaptation of Chinese loanwords and the contraction of the verbal system); and finally (3) the general instability of the language on this point (the morphophonemics of the language during the Muromachi Period being in a state of flux).

With respect to this last contingency the following data are important for both the full understanding of the phonological system and the morphological structure. Let us begin with the spellings for the following presumptive verb forms: cagoe 'will hang,' tagayō 'will violate,' xo 'will do.' To this data we may add that in Japanese orthography each of the stems would be followed by う. They thus resembled the Chinese borrowings which had come into Japanese spelled えう and have in the modern language come to be spelled ゆう. Hashimoto describes the movement of these forms from the Kamakura Period to the Modern as [eu] > [eo] > [eō] > [iō] > [yō].47 He goes on to argue that in the Christian materials the retention of e for such forms as cagoe suggests that, while the pronunciation [jo:] (his [yō]) can be given to most ancient [eu] sounds, the older [eo:] should be retained elsewhere. On the strength of such spellings as tagayō and xo I would take exception to Hashimoto's argument and suggest rather that the e in cagoe was used by the editors as a device within their script, conditioned by the spelling of the stem, to retain the palatalization of a sequence ending in a long vowel sequence. If in fact the [e] were an integral part of the phonation, we would expect spellings such as *xeō and *tagayeō, but since the x and the y supplied the signal for palatalization the e was left out of the spelling. Also, since we have seen that the [e] in Portuguese of the period was itself a relatively
high front vowel, its retention would probably not have given the lower quality that Hashimoto suggests. The conclusion reached here is that the above presumptive forms are [kakjo:], [tāgajo:] and [so:], and that they had in this period already merged with such forms as [kjo:] 'capital', which would have been written qiō by the editors.

The u and v are in complementary distribution as the labial semi-vowel [w]. The v occurs before a and o and after vowels initially, and the u after q, or g only before a. After g, as we have seen in the discussion of the vowel graphs, u has two other functions (as a vowel, and as an orthographic device before i and e to maintain the stopped quality of the preceding consonant). Its use after consonants and before a as a semi-vowel (e.g., quabun [kwābūn] 'excessive') follows Portuguese usage. The morphological elements (all of which are of Chinese origin) that contain this phone have in the modern standard language merged with the syllables without this labialization. Thus quabun is the spelling for a sequence which is reported in Kenkyūsha as kabun.

<table>
<thead>
<tr>
<th>CHART III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Semivowels</strong></td>
</tr>
<tr>
<td>Voiced, Labial</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; Palatal</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>&quot; &quot;</td>
</tr>
</tbody>
</table>


* A rare spelling.

Chart III lists the semivowels reconstructed from the evidence presented by the Mission Press in its transliteration. The graphs in parentheses are those whose presence is necessary for the spelling to reflect that particular phonetic value. It should be noted that, unlike the
other phones, the semivowels are conditioned by elements both follow-
ing and preceding.

The Phonemic System

The purpose of this section is to construct a phonemic system that
will account for all the phonetic elements reconstructed for the script of
the corpus with the minimal inventory of symbols necessary to distin-
guish between all grammatically relevant differences.

Unquestionably there does exist in the language of the text a
considerable inventory of phonemic elements functioning extra-
segmentally. However, it is impossible to reconstruct these features
with any degree of reliability. Pitch, for example, is taken to be phon-
emic in this language, but since there is no way to determine its
distribution in the text, only the segmental phonemes are treated here.

For presentational purposes I have tentatively posited (on the basis
of the modern language and the punctuation of the text) the following
junctural and super-segmental phonemes:

/#/  'Open juncture' (This symbol is used only in referring specifi-
cally to the phenomenon; elsewhere it is, as in the script,
symbolized by space.)

/,.  'Pause' (Has a value of approximately one half syllable of
silence, without a drop in intonation. It appears in the text as
a comma, a semicolon, and sometimes a colon.)

/./  'Stop' (Has the value of a drop in intonation and silence. In
the text it appears as a period or a colon.)

/?.  'Question' (Has the value of a rising final pitch combined with
a 'stop'. The text uses ? in all places where there is no
question particle [e.g., /ka/], and in most instances even then.)

/!/  'Imperative' ( Combines an increase in force and a clipping of
the final phoneme combined with a 'stop'. The text uses !.)
The Vowels

The vowel phonemes are assumed to be five in number:

\[
\begin{array}{c}
/i/ \\
/e/ \\
/o/ \\
/a/ \\
/u/ \\
\end{array}
\]

One of these vowel phonemes is the nucleus of every syllable, either alone or in combination with an initial consonant and/or semivowel and a final lengthening, vowel phoneme or syllable ending consonant plus the semiconsonant. In this phonemic system every syllable can be categorized in the following way:

\[
(C) + (SV) + V + \left\{ \begin{array}{l}
(u) \\
(C')
\end{array} \right\}
\]

The number of syllables in any lexical item is the same as the number of V-shaped phonemes. Those syllables ending in /u/ (e.g., /kyo/ [kyo:] qiô ‘today’) are said to be long syllables while those in /C'/ (e.g., /mit'/ [mit'] mit ‘secret’) are said to be complex.

We have seen ample evidence from other studies of the Christian material to support the positing of nasalized allophones of all vowels before the nasalizing consonants /b/, /d/, /g/, /z/, /n/, and /m/, as well as after /n'/. For our purposes we shall here take this as a generalized feature of the language and not list its occurrence among the allophones.

The establishment of the phoneme /'/ in the description requires some explanation. It is called here the semiconsonant phoneme and does not have an overt symbolization in the script, and its distribution is more restricted than the vowels. There are, however, a number of features of the Jesuit transcription which suggest (along with diachronic, comparative evidence) that there is a phonemic element, with a distribution most like a vowel, present in the language.
In a form such as *xinset* [ɕiŋ̃set] 'kindness', we found that, unlike the vast majority of forms, there is an apparent consonant-consonant sequence as well as a final consonant. As we have seen in the previous section, their occurrences may be reconstructed phonetically as consonantal length, with a distributional pattern of a vowel.

In most structural descriptions of modern standard Japanese (Bloch, Martin, Jorden, *et al.*) the treatment of the phenomenon, as it appears in

<table>
<thead>
<tr>
<th>Chart IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vowel Phonemes</td>
</tr>
<tr>
<td><strong>Phoneme</strong></td>
</tr>
<tr>
<td>/a/ [wɔ]</td>
</tr>
<tr>
<td>/ɔ/</td>
</tr>
<tr>
<td>/ɔ/</td>
</tr>
<tr>
<td>/ɑ/</td>
</tr>
<tr>
<td>/a/</td>
</tr>
<tr>
<td>/e/ [je]</td>
</tr>
<tr>
<td>and initially</td>
</tr>
<tr>
<td>/jo/</td>
</tr>
<tr>
<td>/e/</td>
</tr>
<tr>
<td>/e/</td>
</tr>
<tr>
<td>/i/ [ju]</td>
</tr>
<tr>
<td>/i/</td>
</tr>
<tr>
<td>/i/</td>
</tr>
<tr>
<td>/o/ [wo]</td>
</tr>
<tr>
<td>and initially</td>
</tr>
<tr>
<td>/o/</td>
</tr>
<tr>
<td>/o/</td>
</tr>
<tr>
<td>/u/ [ː]</td>
</tr>
<tr>
<td>and /i/</td>
</tr>
<tr>
<td>and /u/</td>
</tr>
<tr>
<td>and /e/</td>
</tr>
<tr>
<td>and /o/</td>
</tr>
<tr>
<td>/ʊ/</td>
</tr>
<tr>
<td>/u/</td>
</tr>
</tbody>
</table>

The Semiconsonant

/ / [ː] | after /p, t, k, n/ | /sin'set/ [ɕiŋ̃set] | *xinset* ‘kindness’

the modern language, has been to posit a long consonant for voiceless stops and the sibilant (often symbolized by a double consonant or /q/) and a syllabic nasals (often written as /n/) for the [ŋ], [m] (and [ŋ]). In this analysis the length is abstracted as the distinct, semiconsonant phoneme /'/, and for this reason the item xinset above is interpreted as a two syllable lexeme with the shape /sin'set'/. The justification for the establishment of this phoneme to account for consonantal length is found in the greatly increased simplicity of the over-all phonological statement. Chart IV presents a list of all the vowel phonemes and the semiconsonant of the text with their allophones.

It will be noted that historically the allophones [je] and [wo] represent interesting steps in the phenomenon of phonemic merger. In the ancient language these two sequences /ye/ and /wo/ were phonemically in contrast with /e/ and /o/, while in the modern standard language the contrast has disappeared even on the allophonic level. Thus:

<table>
<thead>
<tr>
<th>Ancient</th>
<th>Medieval</th>
<th>Modern</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ye/</td>
<td>/e/</td>
<td>[je]</td>
</tr>
<tr>
<td>/e/</td>
<td>[e]</td>
<td>/e/</td>
</tr>
<tr>
<td>/wo/</td>
<td>/o/</td>
<td>[wo]</td>
</tr>
<tr>
<td>/o/</td>
<td>[o]</td>
<td>/o/</td>
</tr>
</tbody>
</table>

There are in this description of the language two types of phonemically long syllables, those that have been defined above as long (e.g., /kyou/ [kyo:] qio 'today') and complex (e.g., /mit/ [mit] mit 'secret'). Where the text makes use of the two diacritic marks ' ', ' in spelling what may be phonetically interpreted as phonetically long syllables, I have chosen to describe the phenomena as /u/ ending syllables. To phonemicize the verb tago 'to differ' (or vomo 'to think' and yu 'to say') in a way other than /tagau/ (or /omou/ and /yyu/) would create unnecessary sub-classification within the verbal paradigm. Phonetically, the sequence /au/ is [ɔ:], /ou/ is [ɔ:], and /uu/ is [u:]. That is to say that in
certain clearly definable environments /u/ has the value of vocalic length. The occurrence of such phonetically long vowels is best and most simply described thus:

\[
\begin{align*}
/a/ &= [\text{o}] \text{ before } /u/ \\
 &= [\text{a}] \text{ elsewhere} \\
/o/ &= [\text{o}] \text{ in all positions} \\
/u/ &= [:] \text{ after } /a/ \text{ and } /o/ \\
 &= [u] \text{ elsewhere}
\end{align*}
\]

The treatment of vowel sequences other than long vowels will be described in the following section, under vocalic onset.

The Consonants

The consonant phonemes assumed for the text are fifteen in number. There are three significant positions: front, mid (ranging from post-dental to pre-velar), and back. The significant characteristics of articulation are stoppage, continuance, and nasality with the stops and continuants being either voiced or unvoiced. The semivowels are included here with the consonants.

<table>
<thead>
<tr>
<th></th>
<th>front</th>
<th>mid</th>
<th>back</th>
</tr>
</thead>
<tbody>
<tr>
<td>voiced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stops</td>
<td>/b/</td>
<td>/d/</td>
<td>/g/</td>
</tr>
<tr>
<td>unvoiced</td>
<td>/p/</td>
<td>/t/</td>
<td>/k/</td>
</tr>
<tr>
<td>voiced</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuants</td>
<td>/z/</td>
<td>/r/</td>
<td></td>
</tr>
<tr>
<td>unvoiced</td>
<td>/f/</td>
<td>/s/</td>
<td></td>
</tr>
<tr>
<td>Nasals</td>
<td>/m/</td>
<td>/n/</td>
<td></td>
</tr>
<tr>
<td>Semivowels</td>
<td>/w/</td>
<td>/y/</td>
<td></td>
</tr>
<tr>
<td>Vocalic onset</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chart V lists the consonant phonemes with their allophonic variants.

---180---
The overall phonemic system for the consonants has a pattern which gives added weight to the postulated distribution of allophones. For the stops /t/ and /d/, there is affrication before /u/ and affrication plus palatalization before /i/ and /y/, while the continuants /s/ and /z/ are palatalized before /i/, /y/, and /e/.

One fact which is noteworthy is that neither affrication nor palatalization (except with /y/) is phonemic in this language—the first being predictable before /u/ and the second before /i/, /e/, or /y/.

The occurrence of sequences with the phonetic value [śa], [śi], [śu], [še], and [śo] (with the forms xa, xi, xu, xe, and xo in the script), suggests that [ś] might, in fact, have phonemic status. In this description, however, two types of palatalization are postulated for the language. The first, termed natural palatalization, is a result of the occurrence of /s/ and /z/ before /i/ and /e/, and /t/ and /d/ before /i/. The second, or synthetic palatalization, results from the assimilation since the sixth century of Chinese palatal syllables into Japanese.

Thus, phonemically

\[
\begin{align*}
xa & = /syə/ & cha & = /tyə/ \\
xi & = /si/ & chi & = /ti/ \\
xu & = /syu/ & chu & = /tyu/ \\
xe & = /se/ & & \\
xo & = /syo/ & cho & = /tyo/ \\
\end{align*}
\]

The /t/ (as the /d/) phoneme, unlike the /s/, lacks natural palatalization before /e/, while the remaining consonants have only synthetic palatalization before /a/, /o/, and /u/ (cf. Appendix II, the palatal series).

The phoneme of vocalic onset, symbolized by /ː/, has a restricted distribution. It occurs in lexemes that on the phonetic level contain a sequence of vowels that on the phonemic level are not grouped with the long syllables. Take for example the item yamau'si 'mountain ox'. In the script of the Mission Press this form is unambiguously [jâmaʿusi], but to
<table>
<thead>
<tr>
<th>Phoneme</th>
<th>Allophone</th>
<th>Example</th>
<th>Phonetic</th>
<th>Corpus</th>
</tr>
</thead>
<tbody>
<tr>
<td>/k/</td>
<td>[k]</td>
<td>/ak'kou/</td>
<td>[aŋkə:]</td>
<td>accō ‘insult’</td>
</tr>
<tr>
<td>[k]</td>
<td>elsewhere</td>
<td>/bakari/</td>
<td>[bakari]</td>
<td>bacari ‘only’</td>
</tr>
<tr>
<td>/t/</td>
<td>[t]</td>
<td>/at'ta/</td>
<td>[aŋṭa]</td>
<td>atta ‘was’</td>
</tr>
<tr>
<td>[tʃ]</td>
<td>before /i/</td>
<td>/ti.in/</td>
<td>[tiŋʃi]</td>
<td>chiin ‘friend’</td>
</tr>
<tr>
<td>and /y/</td>
<td>/dyotyu/</td>
<td>/dʒotʃu/</td>
<td>[dʒotʃu]</td>
<td>giochā ‘maid’</td>
</tr>
<tr>
<td>[ts]</td>
<td>before /u/</td>
<td>/kitune/</td>
<td>[kitʃu]</td>
<td>qitʃu ‘fox’</td>
</tr>
<tr>
<td>[t]</td>
<td>elsewhere</td>
<td>/toki/</td>
<td>[toki]</td>
<td>toqi ‘time’</td>
</tr>
<tr>
<td>/p/</td>
<td>[p]</td>
<td>/ip'pa.i/</td>
<td>[ippai]</td>
<td>ippai ‘one cupful’</td>
</tr>
<tr>
<td>[p]</td>
<td>elsewhere</td>
<td>/ken 'pe.i/</td>
<td>[kenpei]</td>
<td>qenpei ‘power’</td>
</tr>
<tr>
<td>/g/</td>
<td>[g]</td>
<td>/geni/</td>
<td>[ɡeni]</td>
<td>gueni ‘truly’</td>
</tr>
<tr>
<td>/d/</td>
<td>[dʒ]</td>
<td>/dige/</td>
<td>[dʒiɡe]</td>
<td>gigue ‘commoner’</td>
</tr>
<tr>
<td>and /y/</td>
<td>/dja/</td>
<td>/dja/</td>
<td>[dja]</td>
<td>gia ‘is’</td>
</tr>
<tr>
<td>[dz]</td>
<td>before /u/</td>
<td>/yorodu/</td>
<td>[yorodu]</td>
<td>yorozu ‘many’</td>
</tr>
<tr>
<td>[d]</td>
<td>elsewhere</td>
<td>/fodo/</td>
<td>[fodo]</td>
<td>fodo ‘degree’</td>
</tr>
<tr>
<td>/b/</td>
<td>[b]</td>
<td>/tabun/</td>
<td>[tæbuŋ]</td>
<td>tabun ‘perhaps’</td>
</tr>
<tr>
<td>/n/</td>
<td>[ŋ]</td>
<td>/ten'ma/</td>
<td>[təŋma]</td>
<td>temma ‘demon’</td>
</tr>
<tr>
<td>and /'b'/</td>
<td>/tin'but/</td>
<td>[tʃiŋbuŋ]</td>
<td>chinbut ‘treasure’</td>
<td></td>
</tr>
<tr>
<td>and /'p'/</td>
<td>/kin'pen/</td>
<td>[kiŋpən]</td>
<td>qinpen ‘vicinity’</td>
<td></td>
</tr>
<tr>
<td>[ŋ]</td>
<td>other /'i'/</td>
<td>/zin'kou/</td>
<td>[ziŋkoŋ]</td>
<td>jincō ‘population’</td>
</tr>
<tr>
<td>[n]</td>
<td>elsewhere</td>
<td>/tuno/</td>
<td>[tsuŋo]</td>
<td>tçu ‘horn’</td>
</tr>
<tr>
<td>/m/</td>
<td>[m]</td>
<td>/ame/</td>
<td>[ame]</td>
<td>ame ‘rain’</td>
</tr>
</tbody>
</table>

phonemicize it as /yamausi/ would make it indistinguishable form a possible phonetic form *[jāmō:si]. Conversely, a form such as /syautoku/ ‘naturally’ might be the phonemic notation for *[ʃautoku], a form that the Jesuits would have transcribed as *xautoku, rather than xōtocu [ʃo:toku]. To avoid this ambiguity, the phoneme /-/ has been introduced into the analysis to distinguish clearly between such long syllables of the form /au/ and the sequence of the two phonemes /a/ and /u/. The phoneme of onset may occur between sequences of the same vowel to produce double vowels (e.g., /sa-araba/ [saaraba] saaraba ‘if it is thus’, or /to-o/ [towo] ‘ten’) or successive, different vowels (e.g., /ti-e/chiye [tʃie] ‘wisdom’ and /te-i/ [tei] tei ‘condition’). It will be noted that such sequences most often mark morphological boundaries.
and on this level the distinction between long vowels and sequences of short vowels is most important.

**Conclusion**

We shall close our discussion of the phonology with some general statements concerning the overall system that emerges from the data.

Chart VI will perhaps be useful in visualizing the interrelationships within the phonemic structure. The rear of the structure represents the unvoiced phonemes. The roof consists of the stop series and the semi-vowels, the voiced phonemes mid-way between the two. Below the roof are the continuants with the unvoiced and voiced phonemes located under the stops with the same point of articulation. The right wall is thus composed of front consonants and the left, the alveolars. (It is along this wall that the palatal allophones are clustered.)
The Phonemic Pattern
flimsy portion of the edifice is marked [b]. This reflects the absence of a phoneme with the value [v] that would create a more perfectly symmetrical sound system. It is significant that within the native orthography the /b/ is taken to be the voiced equivalent of /f/ in the morphophonemics, where the voicing of compounds with an /f/ yields a /b/ (e.g., /denˈbu/ ‘farmer’ from /den/ ‘field’ plus /fu/ ‘man’), and where the variants such as samurau, saburau and soro (with its older form safurafu) are to be found. The /r/ is positioned to reflect the additional dimension present in the voiced series.

The front of the structure contains the nasal counterparts of the stops with no back nasal functioning within the system. The simi-vowels stand as the final dimension of the front wall. In the shadow of the structure formed by the consonants the vowel system is displayed. On the left we find a close relationship between the fronted vowels and /y/, even to the degree that the /e/ has an allophone in [je]. To the right there is a parallel relationship between /w/ and [wo].

One of the most significant aspects of the consonantant system is the distribution of allophones in such a way as to reflect, at this period, the emergence diachronically of what in the modern standard language have come to be interpreted as phonemic features. In most reconstructions of ancient Japanese, by Hashimoto, Yoshitake, et al., affrication and palatalization are all but nonoccurrent. Their frequency here in [ts], [tʃ], [dz], [dʒ], [ʃ], [ʒ], and the entire palatal series with [ɹ], shows a marked tendency towards allophonic diversity, resulting, in the modern language, in the establishment of new phonemic distinctions.

In the vowel system there are apparently two tendencies at work. Diversification is noticeable in the increased number of vowel sequences as distinct from the ancient language in which the pattern was almost exclusively consonant-vowel.

These sequences, as can be seen the merging of ancient [eu] and [yoː] to [yoː], were themselves undergoing further simplification, so that for the period being examined there can be established no clearly definable pattern.

In the foregoing phonemic description an attempt has been made to
remain as close as possible to the phonetic data which can be reconstructed from the text, without introducing innumerable, doubtful reconstructions. I have, for example, not suggested the possibility of an allophone [ŋ] for /n/ before /g/ since there is no suggestion of its presence in the script or any of the orthoepic literature.

The two areas where the system of the Mission Press found the greatest difficulties were nasalization and palatalization. From all the evidence which can be garnered with respect to these problems it seems clear that their difficulties arose from complexities intrinsic to the structure of the language they were analyzing. The difficulty of consistently stating the proper values of long nasalized vowels as contrasted with sequences ending in a syllabic nasal (e.g., /tuuda/ [tsu: da] 'to pile up' and /fun 'bet'/ [fu:nbet] 'discretion') might have well taxed the ear of a modern phonetician. The difficulty of distinguishing such sequences as [ju:] and [iu] (orthographically 𛚃 う and 𛚚) in the face of a shifting phonological system is one that has yet to be clearly defined even for the modern language. That the Jesuit Fathers interpreted well is suggested by the fact that a phonemic interpretation presented here, based closely upon an analysis of their transcription, yields a system phonetically quite distinct but phonemically almost identical to that postulated for the modern language.

The ultimate value of this or any phonemic reconstruction is as an efficient tool (its capabilities defined and its limitations noted) with which to approach the more important problems of grammatical description. It is hoped that this description will contribute to that end.
APPENDIX I

A Sample Phonological Analysis

Below is a sample phonological analysis of the final fable of the text. It is presented first in the script, then in a broad phonetic transcription, and finally in the phonemic notation derived from this analysis. These are followed by a very literal translation.

The Script

Xixito, kitçuneno coto


Xitagocoro

Cotobano côxeqini tagô toqiua, fitoga coreuuo xinjenu mono gia.
A Phonetic transcription

sisito, kitsūnēno koto

šiši, moṭtēnōōōkāni aiwādzuroːte sâņząŋno teide aṭṭarēba, jorō-
dzūno kēdâmōno sorewo toitōmurː koto, ḷimāmo nakaṯta. sōnoutšini,
kitsūne bakari, mijēnānda. kokōniwoite, šiši, kitsūnēno motoje šoːsoku
šite, iijaruwa, nānitote, sorēniwa, mijerarēnūzo? žijōno šu: wa, tābūŋ
mīmawaruru nakāni āmari utoutošu: wotōdzurēmo naiwa, kjokūmo nai
šidai dža. šoːtoku, sorēnito waretowa, šiŋšęŋno naka narēba, kjakušin,
arōːzuru gide nai. moši, mata, mīga ujewo utāgawaruruka? sukošiō,
beššiŋwa nai. tatoi, gaiwo našitōːtēmo ĭma, kōno tei dewa, kānawanēba,
woitedwo matśi zōŋzuruto kaita tokorōde, kitsūne, tsuššiŋde, woːše, katā
žiḳēnːoːzōŋzuru saːōōono kototōmo zōŋjeide, kōnōgorowa, buiŋ, ōŋ-
iwo somuite gōzaru, tādaimāmo, mairitōː zōŋzurēdōmo kokōni ōtō-
tsūno ḷusīŋga mairitōː gōzaru. jorōdzūno kēdâmōnōni wōmīmaini
mairaretatowa, wōbošuːte, gōzādokoroje īṭta aṣaitowa arėdomo, deta
aṣiatowa, ōtotsūmo mijēnēba, wōbotsukānːo: zōŋzuruto ōŋzi šita.

śitāgokoro koto

kotōbano kɔːšekini tāgoː tokiwa, ōtōga korewa šiŋžēnu mōno dža.
A Phonemic Transcription

sisi to, kitune no koto

sisi, mot'te no foka ni, a-iwaduraute, san'zan' no te-i de at'tareba, yorodu on kedamono sore o to-îtomarau koto, fima mo nakat'ta. sono uti ni, kitune bakari, mi-enan'da. koko ni o-îte, sisi, kitune no moto e syousoku site, i-iyaru wa. nani tote, sore ni wa, mi-erarenu zo? siyo no syuu wa, tabun', mimawaru naka ni amari uto-utosi-u, otodure mo nai kyoku mo na-i sida-i dya. syautoku, sore ni to ware to wa, sin'set' no naka nareba, kyakusin', arauzuru gi de na-i. mosi, mata, mi ga u-e o utagawaru ru ka? sukosu mo, bes'sin' wa na-i. tatoi, ga-i o nasitaute mo, ima, kono te-i de wa, kanawaneba, o-ide o mati zon'zuru to ka-îta tokoro de, kitune, tus'sin'de, ouse, katazikenau zon'zuru. safodo no koto to mo zon'ze-ide, konogoro wa, bu-in', fon'i o somu-îte gozaru, tada-ima mo, ma -iritau zon'-zuredomo, koko ni fitotu no fusin' ga gozaru. yorodu no kedamono no omima-i ni ma-irareta obosi-ute, gozadokoro e it'ta asi-ato wa aredomo, deta asi-ato wa, fitotu mo mi-eneba, obotukanau zon'zuru to fen'zi sita.

sitagokoro

kotoba no kauseki ni tagau toki wa, fito ga kore o sin'zenu mono dya.
A Translation

The Lion and the Fox

The lion was in a drastic state and was suffering so greatly that all the animals had no respite from visiting him and offering him their consolation. Among them only the fox was not seen. Therefore the lion sent a note of tidings to the home of the fox, "Why don't you come? Since others come to visit me quite often, your being so reserved and not visiting me is a most inharmonious thing. By nature, you and I are very intimate, and therefore this is no matter in which you should be so aloof. Are you worried about yourself? I have nothing on my mind, for even if I wanted to hurt you it would be quite impossible because of my present condition; thus I await your coming," he wrote. Then the Fox politely answered, "I am obliged to you for what you have said; I had no idea that things were like that. Recently I have been aloof, contrary to my intentions. Now, although I wish to visit you, there is one thing that worries me. It appears that many animals have gone to inquire after you, but, though there are many footprints going to your house, I see no footprints leaving, and for this reason I am uneasy."

Moral

When your words differ from your actions, people will not believe you.
APPENDIX II

The Simple Series

<table>
<thead>
<tr>
<th>/-/ /k/</th>
<th>/s/</th>
<th>/t/</th>
<th>/n/</th>
<th>/f/</th>
<th>/m/</th>
<th>/y/</th>
<th>/r/</th>
<th>/w/</th>
<th>/g/</th>
<th>/z/</th>
<th>/d/</th>
<th>/b/</th>
<th>/p/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/a/</td>
<td>a</td>
<td>ca</td>
<td>sa</td>
<td>ta</td>
<td>na</td>
<td>fa</td>
<td>ma</td>
<td>ya</td>
<td>ra</td>
<td>ua</td>
<td>ga</td>
<td>za</td>
<td>da</td>
</tr>
<tr>
<td>/i/</td>
<td>i</td>
<td>qi</td>
<td>xi</td>
<td>ci</td>
<td>ni</td>
<td>fi</td>
<td>mi</td>
<td>ri</td>
<td>—</td>
<td>—</td>
<td>gui</td>
<td>ji</td>
<td>gi</td>
</tr>
<tr>
<td>/u/</td>
<td>u</td>
<td>cu</td>
<td>su</td>
<td>tu</td>
<td>nu</td>
<td>fu</td>
<td>mu</td>
<td>yu</td>
<td>ru</td>
<td>—</td>
<td>gu</td>
<td>zu</td>
<td>zu</td>
</tr>
<tr>
<td>/e/</td>
<td>ye</td>
<td>qe</td>
<td>xe</td>
<td>te</td>
<td>ne</td>
<td>fe</td>
<td>me</td>
<td>re</td>
<td>—</td>
<td>gue</td>
<td>je</td>
<td>de</td>
<td>be</td>
</tr>
<tr>
<td>/o/</td>
<td>vo</td>
<td>co</td>
<td>so</td>
<td>to</td>
<td>no</td>
<td>fo</td>
<td>mo</td>
<td>yo</td>
<td>ro</td>
<td>—</td>
<td>go</td>
<td>zo</td>
<td>do</td>
</tr>
<tr>
<td>/*</td>
<td>—</td>
<td>c</td>
<td>s*</td>
<td>t*</td>
<td>n</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

The Long Series

<table>
<thead>
<tr>
<th>/-/ /k/</th>
<th>/s/</th>
<th>/t/</th>
<th>/n/</th>
<th>/f/</th>
<th>/m/</th>
<th>/y/</th>
<th>/r/</th>
<th>/w/</th>
<th>/g/</th>
<th>/z/</th>
<th>/d/</th>
<th>/b/</th>
<th>/p/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/au/</td>
<td>vő</td>
<td>cő</td>
<td>ső</td>
<td>tő</td>
<td>nő</td>
<td>fő</td>
<td>mő</td>
<td>yő</td>
<td>rő</td>
<td>—</td>
<td>gő</td>
<td>ző</td>
<td>dő</td>
</tr>
<tr>
<td>/ou/</td>
<td>vő</td>
<td>cő</td>
<td>ső</td>
<td>tő</td>
<td>nő</td>
<td>fő</td>
<td>mő</td>
<td>yő</td>
<td>rő</td>
<td>—</td>
<td>gő</td>
<td>ző</td>
<td>dő</td>
</tr>
<tr>
<td>/uu/</td>
<td>ü</td>
<td>ců</td>
<td>sů</td>
<td>tçů</td>
<td>nů</td>
<td>fů</td>
<td>mů</td>
<td>yů</td>
<td>rů</td>
<td>—</td>
<td>gů</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

The Palatal Series

<table>
<thead>
<tr>
<th>/-/ /k/</th>
<th>/s/</th>
<th>/t/</th>
<th>/n/</th>
<th>/f/</th>
<th>/m/</th>
<th>/y/</th>
<th>/r/</th>
<th>/w/</th>
<th>/g/</th>
<th>/z/</th>
<th>/d/</th>
<th>/b/</th>
<th>/p/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/ye/</td>
<td>ya</td>
<td>qia</td>
<td>xa</td>
<td>chz</td>
<td>nha</td>
<td>fia</td>
<td>mia</td>
<td>—</td>
<td>ria</td>
<td>—</td>
<td>guia</td>
<td>ja</td>
<td>gia</td>
</tr>
<tr>
<td>/yo/</td>
<td>yo</td>
<td>qi</td>
<td>xo</td>
<td>cho</td>
<td>nho</td>
<td>fio</td>
<td>mio</td>
<td>—</td>
<td>rio</td>
<td>—</td>
<td>guio</td>
<td>jo</td>
<td>gio</td>
</tr>
<tr>
<td>/yu/</td>
<td>yu</td>
<td>qiu</td>
<td>xu</td>
<td>chu</td>
<td>nhu</td>
<td>fiu</td>
<td>—</td>
<td>riu</td>
<td>—</td>
<td>guiu</td>
<td>ju</td>
<td>giu</td>
<td>—</td>
</tr>
</tbody>
</table>

The Long Palatal Series

<table>
<thead>
<tr>
<th>/-/ /k/</th>
<th>/s/</th>
<th>/t/</th>
<th>/n/</th>
<th>/f/</th>
<th>/m/</th>
<th>/y/</th>
<th>/r/</th>
<th>/w/</th>
<th>/g/</th>
<th>/z/</th>
<th>/d/</th>
<th>/b/</th>
<th>/p/</th>
</tr>
</thead>
<tbody>
<tr>
<td>/yau/</td>
<td>yő</td>
<td>qião</td>
<td>xo</td>
<td>chő</td>
<td>nhő</td>
<td>fő</td>
<td>miő</td>
<td>—</td>
<td>riő</td>
<td>—</td>
<td>guiő</td>
<td>jő</td>
<td>giő</td>
</tr>
<tr>
<td>/you/</td>
<td>yő</td>
<td>qião</td>
<td>xo</td>
<td>chő</td>
<td>nhő</td>
<td>fő</td>
<td>miő</td>
<td>—</td>
<td>riő</td>
<td>—</td>
<td>guiő</td>
<td>jő</td>
<td>giő</td>
</tr>
<tr>
<td>/yu/</td>
<td>yű</td>
<td>qiů</td>
<td>xu</td>
<td>chů</td>
<td>nhů</td>
<td>fů</td>
<td>miů</td>
<td>—</td>
<td>riů</td>
<td>—</td>
<td>guiů</td>
<td>jů</td>
<td>guů</td>
</tr>
</tbody>
</table>

Labial Series

<table>
<thead>
<tr>
<th>/k/</th>
<th>/g/</th>
</tr>
</thead>
<tbody>
<tr>
<td>wa</td>
<td>qua</td>
</tr>
</tbody>
</table>

* In the /s/ and /t/ columns the script produces respectively x and c before the palatal graphs x and ch.

** The long palatal of the /k/, /f/, /r/, and /g/ columns have, in infrequent, free variation, spellings with e; e.g., reő for what is elsewhere riő.
NOTES

1. The single extant copy of this work is now located in the British Museum. A microfilm reproduction made from this volume has served as source material for the present study.

2. The characteristic of spelling all non-Japanese words in the text according to Portuguese orthographic principles is a consistent feature of the work.


5. Kasuga Masaji, "Kokugoshiji no ichi kakki," Nihon bungaku kōza, v. 14, Tokyo, 1929, p. 6. (Throughout this essay Japanese works will be referred to by their Japanese titles only.

6. João Rodrigues, Arte da Lingoa de Japam (Nagasaki, 1604) and the Vocabulario da Lingoa de Japam (published over the years 1603–4, in all likelihood with Rodrigues as editor), are the two basic sources of orthoepic evidence for the language of the period. References to Rodrigues' Arte are followed by page number references to that work. The Japanese edition by Doi Tadao, Rodorigesu Nihon daibunten, Tokyo 1955, retains the pagination of the original and contributes a splendid Japanese translation and commentary. The Vocabulario has been available in a translated version by the Iwanami publishing house, under the Japanese title Nippo-jisho, Tokyo, 1660.


11. These are the letters listed by Rodrigues <227>. The lower case equivalents are: a, b, c, d, e, f, g, h, i, and j, m, n, o, p, q, r, s, and ñ, t, v, and u, x, y, z.

12. There are as well occurrences of s in foreign words (e.g., Delphos <41.18>). However this last item (an item further containing l which is not part of the system under examination), as any foreign word, is not taken to be part of the corpus for this phologological analysis.

13. Its only other function is in such Portuguese words as Grecia 'Greece' <41.16>.

14. To a list of some one hundred examples, the Portuguese word Gêtio 'Gentile' <39.16> may be added to indicate its use in the orthographic tradition of the editors.

—192—
15. Thus *inu de gozaru* would be (spacing aside) the Jesuit, Hepburn and official Japanese transcription of the polite expression meaning 'It's a dog.'

16. The assumption that the sequence *ij* indicated a somewhat shorter sequence than *iy* is but one of several possibilities.


18. For the first and still uncontested statement of these values see Hashimoto Shinkichi, *Bunroku gannen Amakusa-ban Kirishitan kyōgi no kenkyū*, pp. 17–21.


22. See Doi's "Kinko no kokugo," *Kokugokagaku kōza*, v. 31 (1934), p. 32, for an examination of this question with some of the more significant opinions concerning the phonetic value. On this question Doi points out that as early as 1427, in a work entitles *Matsura no no and* attributed to Žeami, the word *jisetsu* 'season' is spelled with a small 'tsu' *kana*. This would indicate that even at that date the final syllable was considered somehow distinctive.

23. This phenomenon is included under the general term *nissho* 'entering sounds' in traditional phonological studies. *Rodrigues* <p. 231> refers to them as *tsumeji* 'stopped letters'.

24. It should be noted in passing, however, that certain Chinese borrowing had been sufficiently assimilated into the Japanese lexicon that they were pronounced in the Japanese way — cf. *mitçu* 'secret' (83.1) where one would expect to find *mit*. 

25. Doi, *op. cit.*, and Iwabuchi Etsutarō, "Kokugo ni okeru nisshō t no rekishi to gairai no mondai," *Nihon shōgaku shinbun iinkai kenkyū hōkoku*, v. 12 (1942) both suggest a slight implosive glottal nasalization with the release of the [t]. This is suggested by the pronunciation traditionally used in *no* chanting and referred to as sounds which one "swallows" (*nomu*). However, any such interpretation more likely reflects a degree of dramatic stylization than a characteristic of colloquial Muromachi speech.


27. Ōtomo, *Muromachi-jidai no kokugo onsei no kenkyū*, p. 703.


29. *Ibid.*, p. 698, reconstructs *[n]* for *n* before the high front vowel and *[j]*. This seems certainly to be correct but I have left it unregistered in this broad transcription.

30. This last has a variant in *vardbe*, <40.14> which reflects a minimal degree of nasalization in this lexical item. Perhaps what is reflected here is only
the natural nasalization before [b] which would suggest a phonetic value of [waräbe].

31. See Thomas R. Hart, Jr., “Notes on Sixteenth Century Portuguese Pronunciation,” *Word*, v. 2 (1955), p. 410. He assigns the above values to the single graphs, and further gives the value [s] to ss. The assumption here of [ss] seems to be unquestionable. (There is no xx in Portuguese.)

32. Hart, *op. cit.*, points out that while the modern spellings with *ch* have the same value as those with *x* (*i.e.*, [§]), this merger had not yet taken place in the 16th century.

33. For the fullest treatment of this matter see Morita Takeshi, *Muromachi-jidai-go ronkō*, Tokyo, 1985, p. 284.

34. Rodriguez spells this sequence *dz*, as in *midzu* ‘water’, while the *Vocabulario* agrees with the script of the *Fabulas*.


38. See Domincovich, *op. cit.*, p. 149.

39. Ōtsuka Takanobu, tr., *Koiyado-chō Nihongo bunten*, Tokyo, 194, p. 4 (This work includes a reproduction of the original Latin text).


41. By the period of the Fables, as the result of a sound change, this word is [Φawa], as seen in the spelling *faua*. This reflects both the several stages in the development of the modern [haha], and the way time spoils riddles.

42. Williams, *From Latin to Portuguese*, xiii.


44. Domincovich, *op. cit.*, p. 139.


46. Williams, *From Latin to Portuguese*, p. 32.

47. Hashimoto, *Kirishitan kyōgi no kenkyū*, p. 54. His [yō] would equal what is here transcribed [jo:].


49. The syllable in Japanese is defined in terms of duration. This duration is substantially the same for syllables consisting of a vowel alone or preceded by a consonant and/or semivowel. Following Charles Hockett, *A Manual of Phonology*, Baltimore, 1955, the syllable is not taken to be a functioning part of the grammatical system, since its occurrence is predictable.


51. Palatalization still occurs in some western dialects today before /e/, though it has been lost in the standard language. Before /i/ and /y/ it is still present.
52. The historical basis for this phenomenon is the borrowing into Japanese of Chinese words which contained palatalized phones.

53. This a result of the loss of a number of consonants intervocally (frequently [k], [ʃ], and [m]) by a phenomenon called in Japanese philology om bin (e.g., /yoki/ /yoi/ ‘good’, /kaʃo/ /kao/ ‘face’ and /yomite/ /youde/ ‘reading’, [the last in the western dialect is accompanied by the change to a voiced stop.])