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Phonetic and Phonological Aspects of the Manchu Vowels  
Reflected in the *Dattan Hyōryūki*

(『韃靼漂流記』に反映された満洲語の母音の音声と音韻)

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## Phonetic and Phonological Aspects of the Manchu Vowels Reflected in the *Dattan Hyōryūki*\*

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Keywords: mid-17th century spoken Manchu, Classical Manchu, Late Middle Japanese, Early Modern Japanese, vowel reduction, Japanese syllabary, *Dattan hyōryūki*

### 1 Introduction

The purpose of this paper is to describe some phonetic and phonological aspects of the mid-17th century Manchu vowels reflected in the *Dattan hyōryūki* (“An account of drifting into Tartary”), produced in 1646 by Japanese officials.<sup>1)</sup> It is an important source material for mid-17th century spoken Manchu.<sup>2)</sup> It contains Manchu words written in kana (Japanese syllabary), dictated by Japanese speakers who learned to speak Manchu but were probably unable to read and write the Manchu alphabet.<sup>3)</sup> In a recent article (Hayata 2016), the present author analyzed the kana transcription for the Manchu coda nasals in the *Dattan hyōryūki* and described some phonetic and phonological aspects of Manchu and Japanese nasal sounds. The present study focuses on the vowel sounds of mid-17th century Manchu.

The original manuscript of the *Dattan hyōryūki* has not survived to the present day. Data are mainly taken from the Arai manuscript (*Echizen Mikuniura ki*), one of the older manuscripts of the *Dattan hyōryūki*, transcribed by Arai Hakuseki (1657-1725). Data from other manuscripts in Sonoda (1939/1991: 300-311) are also referred to where necessary. The main concern of this paper is not to reconstruct the original manuscript by restoring words missing from the Arai manuscript, but to analyze an example of the mid-17th century spoken language.

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1) The *Dattan hyōryūki* is an account of Japanese castaways. In 1644, the very year when the Manchus conquered Beijing, three Japanese merchant ships with 58 crew from the northern part of Fukui Prefecture on board were caught in two storms and drifted into a bay under the control of the Qing Empire. After landing on the shore, the Japanese castaways were ambushed by the locals. Forty three of them were killed and the 15 survivors were sent to Shenyang. In 1646, these 15 survivors returned to Japan after one year’s residence in Beijing, and two of these survivors were sent to Edo (Yedo, present-day Tokyo) for interrogation by the Japanese officials.

2) Ikegami (1955: 453, 454) considers this account to be one of the oldest materials for spoken Manchu.

3) The *Dattan hyōryūki* gives no description of Manchu orthography.

The main body of the paper starts by giving in Section 2 some notes on sound and romanization. Section 3 provides data on the kana transcription for each vowel in the Manchu words in the *Dattan hyōryūki*. Section 4 discusses the phonetic values of the Manchu vowels, and Section 5 concludes the paper by presenting a summary and indicating what remains to be done.

## 2 Sound and romanization

This section gives comments on some points of importance to the phonology and the romanization of Manchu and Japanese.

### 2.1 Manchu

Mid-17th century Manchu had at least five vowel phonemes: /i, e, a, o, u/ (see Figure 1). The typical realization of the vowel /e/ was not a front vowel. The Manchu writing system has six vowel letters: *i, e, a, o, u, ū*. The vowel letter *ū* is not a long vowel but usually a vowel that appears immediately after a uvular consonant.<sup>4)</sup> There are two theories: one says that *u* and *ū* represent the same phoneme, while the other says that they represent different phonemes.

i /i/	u /u/
e /e/	(ū)
a /a/	o /o/

**Figure 1** Manchu vowels

There is room for discussion on whether all non-initial syllables had the same vowel system as the initial syllable. Classical Manchu is widely believed to have had vowel harmony.

The following are important points regarding the sounds of mid-17th century Manchu and romanization of the Manchu alphabet:

- This paper uses *q, g, χ* for uvular consonants in onset position and *k, g, x* for velar consonants in onset position. Although most previous studies fail to make this distinction, using *k, g, h* for both places of articulation, the Manchu writing system treats these two sets of consonants differently at least in onset position.
- The letter *y* represents an approximant consonant (semivowel) and *j* represents an affricate consonant.
- There is a possibility that some of the fricatives were realized as voiced between voiced sonorant segments.
- The Manchu writing system represented *CyV* as *CiyV*, and *CwV* as *CuwV* (or *CūwV*). Neither the Manchu writing system nor the kana writing system at that time accurately represented *CSV*

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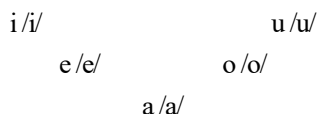
4) It is widely believed that vowel length was not phonologically distinctive in Manchu.

(consonant + semivowel + vowel) sequences.

## 2.2 Japanese

The 17th century was a period of transition from Late Middle Japanese to Early Modern Japanese.

Both Late Middle Japanese and Early Modern Japanese had five vowel phonemes: /i, e, a, o, u/ (see Figure 2).



**Figure 2** Japanese vowels

This paper romanizes kana letters<sup>5)</sup> in the Arai manuscript as shown in Table 1.

**Table 1** Japanese romanization table

ア, a	イ, i	ウ, u	エ, e [je]	ヲ, o
カ, ka	キ, ki	ク, ku	ケ, ke	コ, ko
—	ギ, gi	—	—	—
サ, sa	シ, si [ʃi]	ス, su	セ, se [ʃe]	ソ, so
—	—	—	—	ゾ, zo
タ, ta	チ, ci	—	テ, te	ト, to
—	—	—	—	ド, do
ナ, na	ニ, ni	—	子, ne	ノ, no
ハ, fa	—	フ, fu	ヘ, fe	ホ, fo
バ, ba	ビ, bi	ブ, bu	—	ボ, bo
マ, ma	ミ, mi	ム, mu	メ, me	モ, mo
ヤ, ya	—	ユ, yu	—	ヨ, yo
ラ, ra	リ, ri	ル, ru	レ, re	ロ, ro
ン, N	ツ, T <sup>a</sup>	—	—	—

<sup>a</sup>The Arai manuscript does not use the letter ツ for Manchu CV sequences.

The following are important points regarding the sounds and kana spellings of mid-17th century Japanese:

5) The Arai manuscript uses katakana for the sounds of foreign languages while it uses kanji (Chinese characters) and hiragana for sentences in Japanese.

- In Late Middle Japanese, voiced obstruents were prenasalized. The present author argued in Hayata (2016) that this is also the case in the *Dattan hyōryūki*; Manchu nasal consonants are often dropped in the kana transcription if they are immediately followed by a voiced obstruent.
- Although there was a phonological distinction between voiced and voiceless obstruents, the use of the voicing mark (*dakuten*) was not common in the writing system. As shown below, the kana letters *kV*, *sV*, *tV*, and *fV* were used to represent syllables with phonological voiced or voiceless onsets.

kana without *dakuten*: *kV*/kV, gV/    *sV*/sV, zV/    *tV*/tV, dV/    *fV*/fV, bV/

kana with *dakuten*:    *gV*/gV/    *zV*/zV/    *dV*/dV/    *bV*/bV/

- The present author argued in Hayata (2016) that Manchu word-final /n/ was usually realized as a nasal vowel, while Japanese word-final /N/ was not. Manchu word-final /n/ is usually dropped in the kana transcription in the *Dattan Hyōryūki*.
- Syllable-final [t] was preserved in Late Middle Japanese.
- There was no phonological distinction between [e] and [je]. Japanese /s/ in せ/se/ was realized as palatalized in the Kyoto dialect.

### 2.3 Correction of the text

This subsection corrects obviously miscopied forms in seven Manchu words in the Arai manuscript prior to analysis.

In (1) below, each of the kana transcriptions is missing a letter. The missing letters are supplemented by referring to data from other manuscripts in Sonoda (1939/1991: 300-311).

(1) <i>baniḡa</i> ‘thank you’	バン子 ba-N-ne	→	バン子ハ ba-N-ne-fa <sup>6)</sup>
<i>morin</i> ‘horse’	ウレ u-re	→	モウレ mo-u-re <sup>7)</sup>
<i>ḡadala</i> ‘horse’s bridle’	ハロ fa-ro	→	ハトロ fa-to-ro <sup>8)</sup>

Since ウ *u* and ラ *ra* are similar in shape as kana letters, the one closer to Manchu orthography is adopted as follows in (2).

(2) <i>bira</i> ‘river’	へウ fe-u	→	へラ fe-ra
<i>niyaqūra</i> ‘kneel down!’	ニヨツコウ ni-yo-T-ko-u	→	ニヨツコラ ni-yo-T-ko-ra

Other errors are corrected as shown in (3) below.

6) Many manuscripts read *ba-N-ne-fa* or *fa-N-ne-fa*.

7) Many manuscripts read *mo-u-re*.

8) Other manuscripts read *fā-to-ro*, *ta-to-ro*, *to-ro*, or *fā-ro*.

(3) biya ‘moon, month’	ビツア bi-T-a	→	ビヤア bi-ya-a
yasa ‘eye’	サヤ sa-ya	→	ヤサ ya-sa

### 3 Kana transcriptions for the Manchu vowels

This section compares the kana transcriptions of the Manchu vowels in the *Dattan hyōryūki* and the orthographic representations of those vowels.

#### 3.1 /i/

##### 3.1.1 Word-initial nucleus /i/

In word-initial syllables, the sound of the nucleus /i/ is written as Japanese /i/ or /e/ in kana transcription, except in cases where there is a possibility that the sound of /i/ had been assimilated by the sound represented by the letter *u* in the following syllable<sup>9)</sup> (see Table 2).

**Table 2** Kana transcriptions for the word-initial nucleus /i/

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
	/i/ as Japanese /i/			
indaḡūn	‘dog’	インタホウ	i-N-ta-fo-u	[i <sup>h</sup> daho:]
misun	‘bean paste’	ミシヨ	mi-si-yo	[miʃo]
	/i/ as Japanese /e/ ([je] or [e])			
iḡan	‘cow’	エバ	e-ba	[je <sup>m</sup> ba]
ilan	‘three’	エラ	e-ra	[jera]
bira	‘river’	ヘラ	fe-ra	[bera]
	Other transcriptions			
ninggun	‘six’	ニウコ	ni-u-ko	[n <sup>h</sup> u <sup>h</sup> go]
niru	‘arrow’	ニヨロ	ni-yo-ro	[n <sup>h</sup> oro]

*Notes for Tables 2 to 14:*

Unless otherwise noted, an orthographic form indicates the Manchu word in the standard spelling.

Each of the symbols in the pronunciation column is intended to be a phonetic representation of how speakers of Japanese in those days are most likely to have pronounced the Manchu word transcribed in kana, one that can reasonably be regarded as the closest approximation to the pronunciation of the original Manchu word.

##### 3.1.2 Manchu letter *i* in non-initial syllables

The kana transcriptions for the sounds represented by the Manchu letter *i* in non-initial syllables are similar to those for the word-initial nucleus /i/ (see Table 3). The sound of Manchu letter *i* is written as Japanese /i/ or /e/ in kana transcription.

9) Ikegami (1955: 454) argues that mid-17th century spoken Manchu had already undergone a sound change in which *i* in the first syllable was assimilated to the following vowel in the second syllable.

**Table 3** Kana transcriptions for *i* in non-initial syllables

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
<i>i</i> as Japanese /i/				
beri	‘bow’	フリ	fu-ri	[buri]
ajige	‘young’	アチキ	a-ci-ki	[a <sup>n</sup> dʒi <sup>n</sup> gi]
šasiḡan <sup>a</sup>	‘soup’	シヤシカ	si-ya-si-ka	[ʃaʃika]
<i>i</i> as Japanese /e/				
arki	‘liquor’	アツケ	a-T-ke	[atke]
dekdembi	‘to rise’	ドキトメ	do-ki-to-me	[doki <sup>n</sup> dome]
feksi	‘run!’	ホクセ	fo-ku-se	[fokuʃe]
baniḡa	‘thank you’	バン子ハ	ba-N-ne-fa	[banneha]
morin	‘horse’	モウレ	mo-u-re	[mo.re]
yali	‘meat’	ヤレ	ya-re	[jare]

<sup>a</sup> This word is spelled *šasiḡa* in the *Daicing gurun -i yooni bithe* (a Manchu-Chinese dictionary with a preface dated 1683), while spelled *šasiḡan* in the *Han -i araha Manju gisun -i buleku bithe* (a Manchu monolingual dictionary with a preface dated 1708).

### 3.2 /e/

#### 3.2.1 Word-initial nucleus /e/

In word-initial syllables, the sound of the nucleus /e/ is written as various Japanese vowels. The most frequent one is Japanese /o/ (see Table 4).

**Table 4 Kana transcriptions for the word-initial nucleus /e/**

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
	<i>/e/ as Japanese /o/</i>			
betxe	‘foot’	ボチコ	bo-ci-ko	[botʃiko]
dekdembi	‘to rise’	ドキトメ	do-ki-to-me	[doki <sup>h</sup> dome]
feksi	‘run!’	ホクセ	fō-ku-se	[fokuʃe]
temen (de)	‘(on) camel’	トモド	to-mo-do <sup>a</sup>	[tomo <sup>h</sup> do]
	<i>/e/ as a Japanese rounded long vowel (long /o/)</i>			
defu	‘bean curd’	タウフ	ta-u-fu	[do:ɸu]
	<i>/e/ as Japanese /e/</i>			
jefu	‘eat!’	セブ	se-bu	[dʒe <sup>m</sup> bu]
	<i>/e/ as Japanese /a/</i>			
emu	‘one’	アモ	a-mo	[amo]
	<i>/e/ as Japanese /u/</i>			
beri	‘bow’	フリ	fu-ri	[buri]

<sup>a</sup>The Arai manuscript reads *to-mo-do*, while many manuscripts read *to-mo*. If *to-mo-do* is correct, this is not in the nominative case (*temen*) but in the locative case (*temen de*).

### 3.2.2 Manchu letter *e* in non-initial syllables

The kana transcriptions for the sounds represented by the Manchu letter *e* in non-initial syllables are given in Table 5. These transcriptions are similar to those for the word-initial nucleus /e/.

**Table 5 Kana transcriptions for *e* in non-initial syllables**

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
	<i>e as Japanese /o/</i>			
betxe	‘foot’	ボチコ	bo-ci-ko	[botʃiko]
dekdembi	‘to rise’	ドキトメ	do-ki-to-me	[doki <sup>h</sup> dome]
temen (de)	‘(on) camel’	トモド	to-mo-do	[tomo <sup>h</sup> do]
	<i>e as a Japanese rounded long vowel (long /o/)</i>			
tungse	‘interpreter’	トクソウ	to-ku-so-u	[to <sup>h</sup> guso:]
	<i>e as Japanese /i/</i>			
ajige	‘young’	アチキ	a-ci-ki	[a <sup>h</sup> dʒi <sup>h</sup> gi]
	<i>e as Japanese /a/</i>			
muke	‘water’	ムツカ	mu-T-ka	[mutka]



## 3.3 /a/

## 3.3.1 Word-initial nucleus /a/

The sound of the Manchu word-initial nucleus /a/ is written as Japanese /a/ (see Table 6).

**Table 6** Kana transcriptions for the word-initial nucleus /a/

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
ajige	‘young’	アチキ	a-ci-ki	[a <sup>n</sup> dʒi <sup>n</sup> gi]
ambasa	‘high officials’	アバヅ	a-ba-zo	[a <sup>m</sup> ba <sup>n</sup> dzo]
angca	‘mouth’	アンカ	a-N-ka	[aŋga]
arki	‘liquor’	アツケ	a-T-ke	[atke]
baniya	‘thank you’	バン子ハ	ba-N-ne-fa	[banneha]
dambagu	‘tobacco’	タバコ	ta-ba-ko	[da <sup>m</sup> ba <sup>n</sup> go]
cabta	‘shoot!’	カフタ	ka-fu-ta	[gaɸuta]
cala	‘arm’	カラ	ka-ra	[gara]
ɣadala	‘horse’s bridle’	ハトロ	fa-to-ro	[ha <sup>n</sup> doro]
ɣaɣa jui	‘boy’ <sup>a</sup>	ハラセ	fa-ra-se	[hara <sup>n</sup> dʒe]
ɣalɣūn	‘hot’	ハルコ	fa-ru-ko	[haru <sup>n</sup> go]
jaqūn	‘eight’	チャコ	ci-ya-ko	[dʒako]
nadan	‘seven’	ナタ	na-ta	[na <sup>n</sup> da]
sarcan jui	‘girl’	サルハセ	sa-ru-fa-se	[saruha <sup>n</sup> dʒe]
šan	‘ear’	シヤ	si-ya	[ʃa]
šasiɣan	‘soup’	シヤシカ	si-ya-si-ka	[ʃaʃika]
yali	‘meat’	ヤレ	ya-re	[jare]
(morin) yalu	‘get on the horse!’	モウレヤロ	mo-u-re-ya-ro	[mo:rejaro]
yasa	‘eye’	ヤサ	ya-sa	[jasa]

<sup>a</sup> The *Dattan hyōryūiki* erroneously defines this word as ‘woman’.

3.3.2 Manchu letter *a* in non-initial syllables

In non-initial syllables, the sound of the Manchu letter *a* is written as Japanese /a/, except that three ‘*a*’s are written as Japanese /o/ (see Table 7).

**Table 7** Kana transcriptions for *a* in non-initial syllables

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
<i>a</i> as Japanese /a/				
ixan	‘cow’	エバ	e-ba	[je <sup>m</sup> ba]
ilan	‘three’	エラ	e-ra	[jera]
bira	‘river’	ヘラ	fe-ra	[bera]
indaɣūn	‘dog’	インタホウ	i-N-ta-fo-u	[i <sup>n</sup> daho:]
ambasa	‘high officials’	アバゾ	a-ba-zo	[a <sup>m</sup> ba <sup>n</sup> dzo]
angca	‘mouth’	アンカ	a-N-ka	[aŋga]
baniɣa	‘thank you’	バン子ハ	ba-N-ne-fa	[banneha]
dambagu	‘tobacco’	タバコ	ta-ba-ko	[da <sup>m</sup> ba <sup>n</sup> go]
gabta	‘shoot!’	カフタ	ka-fu-ta	[gaɸuta]
cala	‘arm’	カラ	ka-ra	[gara]
ɣaɣa jui	‘boy’	ハラセ	fa-ra-se	[hara <sup>n</sup> dʒe]
nadan	‘seven’	ナタ	na-ta	[na <sup>n</sup> da]
sarcan jui	‘girl’	サルハセ	sa-ru-fa-se	[saruha <sup>n</sup> dʒe]
šaɣiɣan	‘soup’	シヤシカ	si-ya-si-ka	[ʃaʃika]
yasa	‘eye’	ヤサ	ya-sa	[jasa]
niyaqūra	‘kneel down!’	ニヨツコラ	ni-yo-T-ko-ra	[ni <sup>o</sup> tkora]
niyalma	‘man, person’	ニヤアマ	ni-ya-a-ma	[ni <sup>a</sup> ma]
sunja	‘five’	スシヤ	su-si-ya	[su <sup>n</sup> dʒa]
buda	‘food’	ホタ	fo-ta	[bo <sup>n</sup> da]
<i>a</i> as Japanese /o/				
ambasa	‘high officials’	アバゾ	a-ba-zo	[a <sup>m</sup> ba <sup>n</sup> dzo]
ɣadala	‘horse’s bridle’	ハトロ	fa-to-ro	[ha <sup>n</sup> doro]

## 3.4 /o/

## 3.4.1 Word-initial nucleus /o/

In word-initial syllables, the sound of the nucleus /o/ is written as Japanese /o/ (see Table 8).

**Table 8** Kana transcriptions for the word-initial nucleus /o/

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
/o/ as Japanese /o/				
oforo	‘nose’	ヲホロ	o-fo-ro	[oɸoro]
dolo	‘belly, inside’	ドロ	do-ro	[doro]
χot <sup>a</sup>	‘city wall’	ホツ	fo-T	[hot]
/o/ as a Japanese rounded long vowel (long /o/)				
coqo	‘chicken’	テウコ	te-u-ko <sup>b</sup>	[tʃo:ko]
morin	‘horse’	モウレ	mo-u-re	[mo:re]

<sup>a</sup> In the written language, the Manchu word for ‘city wall’ is *χoton*. It is argued in Hayata (2016: 66) that *χoton* had a colloquial form *χot*.

<sup>b</sup> テウ *te-u* represents [tʃo:].

## 3.4.2 Manchu letter o in non-initial syllables

In non-initial syllables, the sound of the Manchu letter *o* is written as Japanese /o/ (see Table 9).

**Table 9** Kana transcriptions for *o* in non-initial syllables

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
oforo	‘nose’	ヲホロ	o-fo-ro	[oɸoro]
coqo	‘chicken’	テウコ	te-u-ko	[tʃo:ko]
dolo	‘belly, inside’	ドロ	do-ro	[doro]

3.5 /u/ and *ū*

## 3.5.1 Word-initial nucleus /u/

The sound of the Manchu word-initial nucleus /u/<sup>10</sup> is written as Japanese /u/ in four out of six words (see Table 10). The sound of Manchu /u/ in *tungse* is written as Japanese /o/, since the syllable [tu] did not exist either in the Edo dialect or the Kyoto dialect. The sound of Manchu /u/ in *buda* is also written as Japanese /o/. The amount of data is insufficient to answer the question of why the sound of Manchu /u/ in *buda* is written as Japanese /o/.

10) There is no Manchu word with *ū* in the initial syllable in the *Dattan hyōryūki*

**Table 10 Kana transcriptions for the word-initial nucleus /u/**

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
<i>/u/ as Japanese /u/</i>				
uyun	‘nine’	ウヨ	<b>u-yo</b>	[ujɔ]
muke	‘water’	ムツカ	<b>mu-T-ka</b>	[mutka]
sunja	‘five’	スシヤ	<b>su-si-ya</b>	[su <sup>n</sup> dʒa]
šun	‘sun’	シユン	<b>si-yu-N</b>	[ʃuN]
<i>/u/ as Japanese /o/</i>				
buda	‘food’	ホタ	<b>fo-ta</b>	[bo <sup>n</sup> da]
tungse	‘interpreter’	トクソウ	<b>to-ku-so-u</b>	[to <sup>3</sup> guso:]

### 3.5.2 Manchu letter *u* in non-initial syllables

In non-initial syllables, the sound of the Manchu letter *u* is predominantly written as Japanese /o/ (see Table 11). The sound of the Manchu letter *u* in *fu* is written as Japanese /u/.

**Table 11 Kana transcriptions for *u* in non-initial syllables**

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
<i>u as Japanese /o/</i>				
misun	‘bean paste’	ミシヨ	<b>mi-si-yo</b>	[miʃo]
ninggun	‘six’	ニウコ	<b>ni-u-ko</b>	[n <sup>i</sup> u <sup>o</sup> go]
niru	‘arrow’	ニヨロ	<b>ni-yo-ro</b>	[n <sup>i</sup> oro]
emu	‘one’	アモ	<b>a-mo</b>	[amo]
dambagu	‘tobacco’	タバコ	<b>ta-ba-ko</b>	[da <sup>m</sup> ba <sup>o</sup> go]
(morin) yalu	‘get on the horse!’	モウレヤロ	<b>mo-u-re-ya-ro</b>	[mo:rejaro]
uyun	‘nine’	ウヨ	<b>u-yo</b>	[ujɔ]
<i>u as Japanese /u/</i>				
jefu	‘eat!’	セブ	<b>se-bu</b>	[dʒe <sup>m</sup> bu]
defu	‘bean curd’	タウフ	<b>ta-u-fu</b>	[do:ɸu]

### 3.5.3 Manchu letter *ū* in non-initial syllables

In non-initial syllables, the sound of the Manchu letter *ū* is written as Japanese /o/ (see Table 12). Although the Manchu letter *ū* does not represent a long vowel, the sound of the Manchu letter sequence ‘*ūn*’ in *indaχūn* ‘dog’ and *giyaχūn* ‘hawk’ is written as *ou* [o:] in the kana transcriptions.<sup>11)</sup>

**Table 12** Kana transcriptions for *ū* in non-initial syllables

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
<i>indaχūn</i>	‘dog’	インタホウ	i-N-ta- <b>fō</b> -u	[i <sup>n</sup> daho:]
<i>χalyūn</i>	‘hot’	ハルコ	fa-ru- <b>ko</b>	[haru <sup>n</sup> go]
<i>jaqūn</i>	‘eight’	チャコ	ci-ya- <b>ko</b>	[dʒako]
<i>niyaqūra</i>	‘kneel down!’	ニヨツコラ	ni-yo-T- <b>ko</b> -ra	[nʰotkora]
<i>giyaχūn</i>	‘hawk’	キヤホウ	ki-ya- <b>fō</b> -u	[gʰaho:]

### 3.6 *ui* and *oo*

There are not many Manchu words with diphthongs in the Arai manuscript (see Table 13).

The kana transcriptions for *ui* in *χaxa jui* and *sargan jui* cannot be used as reliable examples of diphthongs. The present author pointed out in Hayata (2016: 65) that there is a possibility that *χaxa jui* was pronounced as if it were spelled *χaxaji* and *sargan jui* was pronounced as if it were spelled *sarga(n)ji*.

It is controversial whether or not the Manchu letter sequence *oo* in *boo* represents /ou/. The sound of the Manchu letter sequence *oo* is written as *ou* [o:] in the kana transcription for *boo*. From this kana transcription, it cannot be determined whether this is a diphthong or a (phonetic) long vowel.

**Table 13** Kana transcriptions for *ui* and *oo*

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
	Manchu letter sequence <i>ui</i>			
<i>duin</i>	‘four’	ドイ	<b>do-i</b>	[doi]
<i>χaxa jui</i>	‘boy’	ハラセ	fa-ra- <b>se</b>	[hara <sup>n</sup> dʒe]
<i>sargan jui</i>	‘girl’	サルハセ	sa-ru-fa- <b>se</b>	[saruha <sup>n</sup> dʒe]
	Manchu letter sequence <i>oo</i>			
<i>boo</i>	‘house’	ホウ	<b>fō-u</b>	[bo:]

11) This topic is discussed in Hayata (2016).

The sound of the Manchu letter sequence *du* in *duin* is written as Japanese /do/, since the syllable [du] did not exist either in the Edo dialect or in the Kyoto dialect.

### 3.7 *CiyV* and *CuwV*

Table 14 gives Manchu words with the *CiyV* or *CuwV* letter sequences. The sound of the Manchu letter sequence *wa* is not written as Japanese /wa/ or /ba/ in *juwan*, *cuwan*, and *tuwa*. Ikegami (1993/1999: 325) argues that *tuwa* in the *Dattan hyōryūki* was a monosyllabic word.

The phonological interpretation of the approximants in the *CiyV* and *CuwV* letter sequences in mid-17th century spoken Manchu is open to question. The syllables with these letter sequences shown in Table 14 are excluded from consideration in this paper.

**Table 14** Kana transcriptions for *CiyV* and *CuwV*

Orthographic form	Gloss	Kana transcription		
		Kana	Romanization	Pronunciation
C+iya				
biya	‘moon, month’	ビヤア	bi-ya-a	[b'a:]
niyaqūra	‘kneel down!’	ニヨツコラ	ni-yo-T-ko-ra	[n'otkora]
niyalma	‘man, person’	ニヤアマ	ni-ya-a-ma	[n'a.ma]
giyaχūn	‘hawk’	キヤホウ	ki-ya-fo-u	[g'aho:]
C+uwa				
juwan	‘ten’	チヨエ	ci-yo-e	[dʒoje]
cuwan	‘ship’	チヨアン	ci-yo-a-N	[tʃoan]
tuwa	‘fire’	トア	to-a	[toa]
C+uwe				
juwe	‘two’	チヨヤ	ci-yo-ya	[dʒoja]

## 4 Phonetic values of the Manchu vowels

In general in word-initial syllables, the sound of Manchu nucleus /i/ is written as Japanese /i/ or /e/, and the sounds of Manchu nuclei /e, a, o/ and /u/ are written as Japanese /o, a, o/ and /u/, respectively.

The kana transcriptions for the sound of Manchu letter *i* indicate that Manchu /i/ was realized as both a close vowel and a close-mid vowel. This suggests that Manchu /i/ and /e/ were distinguished by backness rather than vowel height, while Japanese /i/ and /e/ were distinguished by vowel height.

Some kana transcriptions indicate vowel reduction. In non-initial syllables, the sound of the Manchu letter *u* (except in *fu*) is not written as Japanese /u/ but written as Japanese /o/. This suggests that Manchu /u/ was not realized as a high vowel in non-initial syllables. The sounds of the three Manchu letter ‘*a*’s in non-initial syllables are written as Japanese /o/. This suggests that these Manchu vowels were not realized as low vowels but as mid vowels that resemble the Manchu word-initial nucleus /e/ [ə].

## 5 Conclusion

This study analyzed the characteristics of the vowels of mid-17th century spoken Manchu reflected in the Arai manuscript of the *Dattan hyōryūki*. The comparison of the kana transcriptions and the Manchu orthography revealed some phonetic and phonological aspects of the Manchu vowels and provided evidence for the existence of vowel reduction in non-initial syllables. In particular, the fact that the sound of the Manchu vowel letter *u* was transcribed into Japanese /o/ supports this conclusion.

Additional work is required on the Manchu vowel system and (so-called) vowel harmony. The scope of the present study has been limited to a few characteristics of the vowels due to the lack of narrow phonetic information in kana transcription. Data from the *Dattan hyōryūki* alone are insufficient to ascertain the details of the speech sounds. A broader approach is needed to determine the speech sounds and the phonology of mid-17th century spoken Manchu.

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## 『鞆鞆漂流記』に反映された満洲語の母音の音声と音韻

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『鞆鞆漂流記』新井本にある満洲語口語音の仮名表記を用いて当時(17世紀半ば)の満洲語の母音を考察する。満洲文字表記上の単純母音 *i, e, a, o, u* は、日本語話者による満洲語口語の仮名表記では、語頭音節においては、ほぼ、*i* が日本語の */i/* と */e/*, *e* が日本語の */o/*, *a* が日本語の */a/*, *o* が日本語の */o/*, *u* が日本語の */u/* として表記されている (*ū* を語頭音節に持つ語は本資料中に無い)。非語頭音節となると傾向が異なり一部の母音が不明瞭に発音されている事がうかがえる。非語頭音節の *u* は多くが日本語の */o/* として表記されており、唇の丸めはあるものの開口度は狭くないことがわかる。非語頭音節の *a* のなかには満洲語の *e* 同様に日本語の */o/* として表記されているものがある。この表記から、満洲語の非語頭音節の *a* の一部が、満洲語の *e* の音声により近い開口度で発音されていた事がうかがえる。『鞆鞆漂流記』の仮名表記は、当時の満洲語口語音で母音弱化があったことを示している。