

MORAIC TETRAMETER IN JAPANESE POETRY

TOMOKO KOZASA

University of Hawai'i at Mānoa

INTRODUCTION*

1. The study of meter has a long history. The majority of recent studies based on generative phonology have looked at the stress pattern (Hayes 1983, Kiparsky 1977, Prince 1990) or the tonal system (Chen 1979, Yip 1984). Some researchers seem to believe meter to be *eurhythmic* (Hayes 1989, Hanson & Kiparsky 1996, Nespor and Vogel 1986, Prince 1989); that is, meter is inherently rhythmic. However, such theories do not account for the meter of languages that do not have linguistic stress.

The mora is a key element of Japanese phonology (McCawley 1968, Vance 1987, Shibatani 1990). It is the unit of length and, thus, the Japanese language can be classified as a quantitative language. On that basis, the meter should be quantitative; that is, Japanese meter completely depends on the number of moras per line and has no stress or tonal patterning.

The most distinguished characteristic of Japanese poetry is its strict versification rule; each line has to consist of either five or seven moras. There is a misconception that this formation rule reflects the meter (Miller 1967, Cranston 1993). However, according to Kawakami (1973) that it is well known that Japanese verse is read with eight beats per line. This paper suggests that meter in Japanese poetry is moraic tetrameter and that catalexis plays a crucial role.

I will discuss the foot structure of Japanese (§ 2), and briefly introduce various types of Japanese poetry (§ 3). Then I will illustrate the verse line structure by analyzing *Tanka* (§ 4), and end with a brief conclusion (§5).

FOOT STRUCTURE AND PROSODIC MINIMALITY IN JAPANESE

2. Trubetzkoy's introduction of the useful terms "syllable-count language" and "mora-count language" changed the trend of study of prosodic phonology. By definition, a heavy syllable consists of two moras and a light syllable consists of one mora. In Japanese, the heavy syllable is realized with a long vowel, a mora nasal, or the first part of geminate consonants. For instance, the second syllable of the word *Sony* and the first syllable of *Honda* and *Nissan* have two moras; and each syllable in the word *Kawasaki* has a single mora.

(1) long vowel	(2) mora nasal	(3) geminate	(4) light syllables
μμ	μμ	μμ	μ μ μ μ
<i>so-nii</i>	<i>hon-da</i>	<i>nis-san</i>	<i>ka-wa-sa-ki</i>
'sony'	'Honda'	'Nissan'	'Kawasaki'

Since Poser (1990) has argued the existence of bimoraic foot structure in Japanese, a significant amount of evidence has been attested (Ito 1990, Kitagawa & Mester 1996, Ota 1999). The evidence is found in truncation processes in hypocoristic, kinship terms, *geisha* client names, rustic girls' names, and loan words; and in *renyookei* reduplication, onomatopoeia.

* This paper owes a numerous debts to Chris Golston for his enduring supports and help. All errors are mine.

2.1 DI-MORAIC WORDS. Poser (1990) argues that foot structure of Japanese is bimoraic based on his examination of the phenomena of truncation and reduplication.

Hypocoristic and kinship term formations

Japanese has several hypocoristic suffixes such as *-chan*, *-san*, and *-sama*. They are added to a full name, a modified form of the name, or a kinship term. Using *-chan* may be considered to be the least formal, adding *-san* the most general way to call others, and adding *-sama* the most polite. For example, a person named *Masako* would be called *Masako-sama*, *Masako-san*, and *Masako-chan*; also, the name can be modified as *masa-chan*, *mako-chan*, *sako-chan*, and *maa-chan* in an informal setting and/or among family members and close friends. Every shortened name satisfies a bimoraic foot template.

- | | | | |
|-------------------------|---------------------|---------------------|--------------------|
| (5) a. <i>masa-chan</i> | b. <i>mako-chan</i> | c. <i>sako-chan</i> | d. <i>maa-chan</i> |
| [μμ] | [μμ] | [μμ] | [μμ] |

Bar-girls and *geisha* use a special modified form of regular clients’ surnames. Its formation indicates the foot structure of Japanese is bimoraic as well.

- | | | | |
|--------------------|---------------------|---|-----------------------|
| (6) a. ‘Mr. Honda’ | <i>honda-san</i> | → | <i>o-hoo-san</i> |
| | [μμμ] | | [μμ] |
| b. ‘Mr. Fujimura’ | <i>fujimura-san</i> | → | <i>o-fuu-san</i> |
| | [μμμμ] | | [μμ] |
| c. ‘Mr.Hattori’ | <i>hattori-san</i> | → | <i>o-haa-san</i> |
| | [μμμμ] | | [μμ] (Poser 1990: 92) |

We are able to observe the identical patterns in kinship term formation. It is very common to use *-san* with kinship terms along with an honorific prefix *o-*. For example, *o-too-san* ‘father,’ *o-kaa-san* ‘mother,’ *o-nii-san* ‘older brother,’ and *o-nee-san* ‘older sister.’ All the roots of the kinship terms are two moras.

- | | | | |
|-------------------------|---------------------|---------------------|---------------------|
| (7) a. <i>o-too-san</i> | b. <i>o-kaa-san</i> | c. <i>o-nii-san</i> | d. <i>o-nee-san</i> |
| [μμ] | [μμ] | [μμ] | [μμ] |

Reduplication

Most Japanese mimic words, or onomatopoeia, are derived by duplicating bimoraic morphemes. These duplicated words are called *jyo-go* and most of them have four moras; reduplicated bimoraic stems.

- | | | | | |
|-----|------------------|---------------------|------------------|---------------------------|
| (8) | <i>pika-pika</i> | ‘shiny, flashing’ | <i>run-run</i> | ‘gladly’ |
| | [μμ] [μμ] | | [μμ][μμ] | |
| | <i>sara-sara</i> | ‘smooth’ | <i>gun-gun</i> | ‘(growing) steadily’ |
| | [μμ] [μμ] | | [μμ][μμ] | |
| | <i>doki-doki</i> | ‘nervously excited’ | <i>hii-hii</i> | ‘barely (doing)’ |
| | [μμ][μμ] | | [μμ][μμ] | |
| | <i>niko-niko</i> | ‘smiling’ | <i>pyuu-pyuu</i> | ‘(the wind is) whistling’ |
| | [μμ][μμ] | | [μμ][μμ] | |

There are some reduplicated words whose stems are three moras.

- (9) *sarari-sarari* ‘smoothly’ *nosori-nosori* ‘sluggishly’

However, these stems are often used with adverbializer suffix *-to*,

- (10) *sarari-to* ‘smoothly’ *nosori-to* ‘sluggishly’

The words in (10) consist of four moras. In addition, I have noticed that when the adverbializer suffix *-to* is used with bimoraic stems, its [t] is geminated, so that the words become four moras.

- (11) **pika-to* > pi-ka-t-to ‘flashing’ **gun-to* > gu-n-t-to ‘(growing) steadily’
 [μμ][μ] [μ μ μ μ] [μμ][μ] [μ μ μ μ]
 **sara-to* > sa-ra-t-to ‘smoothly’ **doki-to* > do-ki-t-to ‘frightened’
 [μμ][μ] [μ μ μ μ] [μμ][μ] [μ μ μ μ]
 **niko-to* > ni-ko-t-to ‘smiling’
 [μμ][μ] [μ μ μ μ]

There is another type of reduplications called *renyookei* reduplication; a unique way to describe how actions are performed in Japanese.

- (12) *Taroo-wa nakinaki kaetta.* (Poser 1990:93)
 Taroo-TOPIC crying returned.
 ‘Taroo went home crying.’

The stem of the reduplicated word *naki* is a verb form known as *renyookei*, infinitive form derived from the plain form *naku*, and the word describes how *Taroo* went home. Other reduplicated forms are:

- (13) a. *tabetabe* ‘while eating’ < *tabe-ru* ‘eat’
 [μμ][μμ]
 b. *yomiyomi* ‘as reading’ < *yo-mu* ‘read’
 [μμ][μμ]
 c. *siisii* ‘as doing’ < *su-ru* ‘do’
 [μμ][μμ]
 d. *miimii* ‘as watching’ < *mi-ru* ‘see, watch’
 [μμ][μμ]

Half of each reduplicated word is bimoraic.

Truncation in loan words

Itô (1990) also argues that Japanese foot structure is bimoraic based on her examination of the loan-word truncation patterns. Japanese have been borrowing words from all over the world; however, Japanese tend to shorten those loan-words instead of adopting them as they are.

- (14) [μμ]

<i>suto(raiki)</i>	‘strike’	<i>ama(chua)</i>	‘amateur’
<i>ope(reeshoN)</i>	‘operation’	<i>kone(kushoN)</i>	‘connection’
<i>zemi(naaru)</i>	‘seminar’	<i>puro(fesshonaru)</i>	‘professional’

(15) [μμ] + [μμ]

<i>ame-futo</i>	‘American football’	<i>rimo-kon</i>	‘remote control’
<i>seku-hara</i>	‘sexual harassment’	<i>waa-puro</i>	‘word processor’
<i>paso-kon</i>	‘personal computer’	<i>pan-suto</i>	‘panty stocking’

The shortening pattern in (15) is very common even in Japanese words as well:

(16) [μμ] + [μμ]

<i>gaku-wari</i>	< <i>gakusei waribiki</i>	‘student discount’
<i>koku-reN</i>	< <i>kokusai rengoo</i>	‘the United Nations’
<i>too-dai</i>	< <i>tookyoo daigaku</i>	‘Tokyo University’
<i>ten-doN</i>	< <i>tempura donburi</i>	‘tempura bowl’ (a type of meal)

All of the derivational processes above illustrate that Japanese foot structure is bimoraic.

2.2 MONO-MORAIC WORDS. There are numerous mono-moraic words in Japanese:

(17)	<i>su</i>	‘vinegar’	<i>ki</i>	‘tree’	<i>sa</i>	‘difference’
	<i>ha</i>	‘teeth’	<i>hi</i>	‘fire’	<i>ne</i>	‘root’
	<i>me</i>	‘eye’	<i>wa</i>	‘sum’	<i>ke</i>	‘hair’

However, when native Japanese speakers utter these words alone, they usually insert a glottal stop [ʔ] after the word or lengthen the vowel; particularly in Kansai¹ dialect, the vowel is almost always lengthened. Either operation makes the word bimoraic:

(18)	<i>su</i>	>	<i>suʔ</i> or <i>suu</i>	<i>ki</i>	>	<i>kiʔ</i> or <i>kii</i>	<i>hi</i>	>	<i>hiʔ</i> or <i>hii</i>
			[μμ] [μμ]			[μμ] [μμ]			[μμ] [μμ]

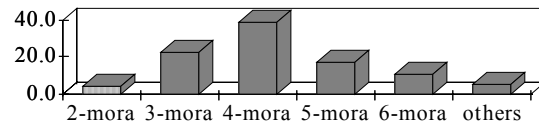
If we consider this phenomenon, we can still say that Japanese foot structure is bimoraic despite the fact that the root is sometimes mono-moraic.

2.3 JAPANESE WORDS

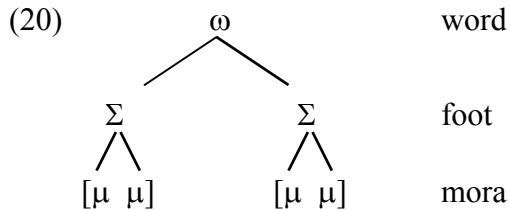
As we have seen above, Japanese foot structure is bimoraic; that is, Japanese words are comprised of bimoraic feet. In fact, almost 40% of the lexicon in *Nihongo Akusento Jiten* (1951), ‘Japanese Accent Dictionary,’ is four moras, i.e., two feet (Sakano 1996).

¹Regions in the central Japan, around the cities of Okasa, Kyoto, Nara, and Kobe.

(19)	2-mora word	4.8%
	3-mora word	22.7%
	4-mora word	38.8%
	5-mora word	17.7%
	6-mora word	11.0%
	others	5.0%



According to these data, I can conclude that the unmarked prosodic word in Japanese is as below in (20):



JAPANESE POETRY

3. There are five major forms in classical Japanese poetry; *Kata-uta*, *Sedooka*, *Tanka*, *Bussoku-sekika*, and *Chooka*. *Haiku* is another well-known form of Japanese poetry although it is not considered classical Japanese poetry.

Kata-uta 5-7-7 5[*hasikeyasi*] 7[*wagi-e no kata yo*] 7[*kumoi tachitumo*]
Kata-uta can be seen mostly in the *Nihonshoki*² (720AD) and the *Kojiki*³ (712AD). We do not see many *Kata-uta* in other literature.

Sedooka 5-7-7-5-7-7
There are 60 *Sedooka* in the *Man'yoo-shuu*⁴ (759 AD), but it faded out sometime at the end of the *Man'yoo-shuu* period, which may be around 730 AD.

Tanka 5-7-5-7-7
The origin of *Tanka*, literally 'short poem,' is vague, but it is the most popular form and has the longest history. It appeared already in the *Kojiki* (712 AD), and it dominated Japanese literature during the Heian period (794 – 1192 AD); millions of people are still composing *Tanka* these days. Because of its popularity and distribution, *Tanka* became the prototype of Japanese poetry.

Bussokusekika 5-7-5-7-7-7
The name *Bussokusekika* came from the fact that this form of verse was carved on a stone which is said to be the footprints of Buddha; *Bussoku* means feet of Buddha, *seki* means a stone, and *ka* means verse. There are 21 verses on the stone at Yakusi-ji temple in Nara city. There is only one instance in the *Man'yoo-shuu*.

² It is known to be the first Japanese History book.

³ Japanese Myth said to be compiled in 712 AD, based on the recitation by Hieda-no Are.

⁴ The oldest anthology in Japan. It comprised about 4,500 poems. The oldest poem among them is said to be written in the early 7th century.

Chooka 5-7-5-7- ... -5-7-7

In this form, the sequence of five- and seven-mora lines is repeated more than three times and it ends with a seven-mora line. *Chooka* was culminated in the *Man'yoo-shuu*. The longest *Chooka* in the *Man'yoo-shuu* comprised 149 lines by Hitomaro.

Haiku 5-7-5

Along with *Tanka*, *Haiku* is a very popular verse form in Japan these days. The most famous *Haiku* poet is Matsuo Basho. He compiled the travel journals *Oku-no Hosomichi* in which the highest artistic development of *Haiku* was achieved.

The rigid rules of composition of Japanese poetry, regardless the form, require that a line comprises five or seven moras. The total length of these different types of poetry varies but they all consist of the sequence of seven- or five-mora lines; seven- or five-mora per line is the salient property of Japanese poetry.

JAPANESE METER

4.1 Meter is an abstract pattern or requirement which distinguishes verse from prose; moreover, its phonological rules have to correspond to the general phonology of the language. Poser (1990) suggests that just as bimoraic feet are independent of the pitch-accent system in Japanese, the rhythmic system and the tonal system are independent. Therefore, it is not surprising that Japanese meter is completely quantitative.

As I mentioned above, Japanese versification is based on five and seven-mora lines. However, Japanese verse is generally recited with eight beats per line. This is called 'Quadruple Time Style,' "in which each measure contains four rhythmic units; each rhythmic unit contains two moras of the text or a pause equal to two morae in duration or a one mora text accompanied by one mora pause." (Kawakami 1974: 665)

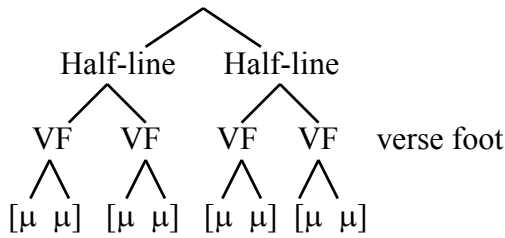
This means that Japanese meter is moraic tetrameter, each line consisting of four bimoraic feet. Golston and Riad (1997) propose that the possible quantitative verse feet are limited to the following nine pairs:

(21) Possible verse feet (L: light syllable, H: heavy syllable)

[L H]	[L L]	[L LL]
[H H]	[H L]	[H LL]
[LL H]	[LL L]	[LLLL]

Japanese verse feet are strictly [L L], and they are completely independent of its pitch-accent. The metrical structure of Japanese verse can be illustrated as follows:

(22) Line

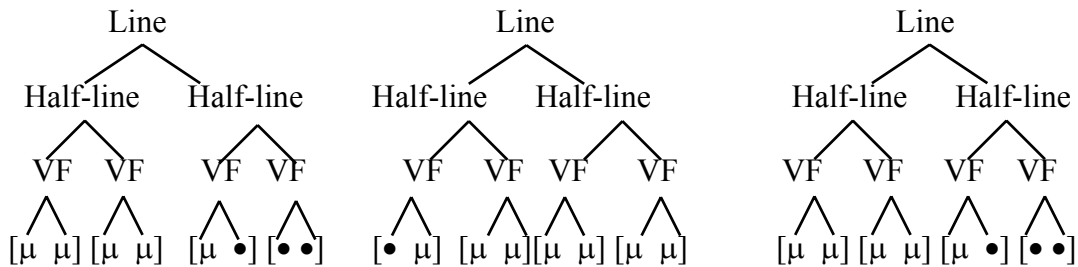


4.2 DATA: OGURA HYAKU-NIN ISSHU

I chose *Ogura Hyaku-nin Isshu*, or ‘Single Verse by a Hundred Poets; Ogura⁵,’ as my main corpus. *Hyaku-nin Isshu* is said to have been compiled by Fujiwara Teika in the 13th century. He chose one hundred *Tanka* from those written between the mid-8th century and the 13th century. *Hyaku-nin Isshu* has been used for a game called *uta-garuta* or “the game of poetry-cards” since the 16th century. This game requires a reader to read every poem aloud. The poems in *Hyaku-nin Isshu* have been recited by people for hundreds of years: they must be not only artistically but also phonologically well-formed.

I present the unmarked structure of *Tanka* below. In scansion, it is common to separate *Tanka* into two parts, *Kami-no ku*, upper phrase, and *Shimo-no ku*, lower phrase. The symbol ‘•’ indicates a silent mora, or silent demibeat (Selkirk 1984) or catalectic position, a metrical position in the meter that is not filled with text (Golston and Riad 1997).

(23) *Kami-no ku* ‘upper phrase’



I have looked at every line and found that of the first and the third lines, which contain five moras, 81.7% of them have mono-moraic words at the end (see Table 1). Thus at least one silent mora should be at the end of the line. Moreover, two thirds of five-mora lines contain five-mora words; 72.0% of the first line and 67.0% of the third line, which means the silent moras do not intervene in the middle of the lines. Their positions must be at the beginning or the end. As for the first line, it is natural not to put silent mora at the beginning. Thus the catalectic position must be between the first and the second lines. Also, since the first three lines form a constituent of *Kami-no ku*, it is reasonable for the third line to have the catalectic position at the end.

Prosodic word boundaries – five-mora lines

ending with an odd number moraic word	ending with di-moraic word
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⁵ Teika had a cottage in a town called Ogura. These hundred verses were written on doors in this cottage. Since this anthology became so popular that Japanese often just say *Hyaku-nin Isshu* referring to Ogura version.

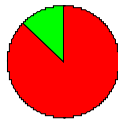
1-1 2-1	<i>yo-no naka-ha</i>	2-1 2	<i>ama-no hara</i>
1-1 3	<i>yo-mo sugara</i>	3-2	<i>kanashi-kere</i>
1-3 1	<i>ta-makura ni</i>		
2-1 1-1	<i>haru-no hi-ni</i>		
2-2-1	<i>hatsu-shimo-no</i>		
2-3	<i>yama-zakura</i>		
3-1-1	<i>omoho-de-ni</i>		
4-1	<i>itazura-ni</i>		
5	<i>chihayaburu</i>		

Table 1⁶

ends with	1 st line	%	3 rd line	%
mono-	80	87.0	72	76.7
di-moraic	12	13.0	22	23.3
Total	92	100.0	94	100.0

1st line

bi (13.0%)



mono (87.0%)

3rd line

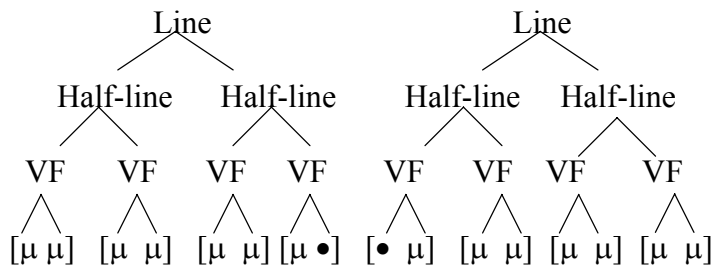
bi (23.4%)



mono (76.6%)

The second lines which contain seven moras do not seem to have a marked silent mora position, as 50.5% of them end with a di-moraic word and 49.5% with a mono-moraic word.

(24) *Shimo-no ku* ‘lower phrase’



⁶ To make it simple, I excluded the *ji-amari* line in which contains an extra mora. I will discuss *ji-amari* in section 4-3.

Since almost two thirds (59.8%) of the fourth lines end with a mono-moraic word, we can assume that at the end of the line is the preferable silent mora position. In contrast to the third and the fourth line, vast majority of the last lines (87 out of 90; 96.7%) end with a di-moraic word. Therefore, the silent mora position for the last line thus has to be at the beginning of the line.

(25) Prosodic word boundaries – seven-mora lines (the final lines)

2-1 4	<i>ama-no hashidate</i>
1-2 2-2	<i>na-koso oshi-kere</i>
2-1 2-2	<i>aki-no yufu-gure</i>
3-2 2	<i>omowa-zari keru</i>

Although there are three cases that end with the bi-moraic word, in those cases they are all syntactically marked; a mono-moraic particle attached to the final word. The author seemed to choose not to use a bi-moraic word at the end of the line purposely; avoiding the ordinary ending for poetic effect.

(26) Marked ending

2 2-2-1	<i>ware nara-naku-ni</i>
2-2 2-1	<i>tomo-nara naku-ni</i>
3-1 2-1	<i>inora-nu mono-wo</i>

Hence, we can still assume that the position for the silent mora is at the beginning of the line.

4.3. JI-AMARI. Despite the strict formation rule, *Tanka* occasionally has an extra mora in a line which is called *ji-amari*. Motoori Norinaga (1776) pointed out that every *ji-amari* line includes a vowel sequence.

I have examined *Tanka* in *Hyaku-nin Isshu*, and there are 35 cases of *ji-amari*. As expected, each of these 35 lines has a word that starts with a vowel preceded by a vowel (see Table 2). Miller examines *Bussokusekika*, and concludes that, “within the sequence, in five-foot [mora] lines and seven-foot [mora] lines as well, the third foot [mora] is the dominant, favored location for metrical irregularity” (1975:68). He continues that in the case of five-mora lines, the fourth mora was the second choice; and in the case of seven-mora lines, the fifth is the second favorite position. However, as we can see in Table 2, these statements do not apply to *Hyaku-nin Isshu*.

Table 2⁷

⁷ I followed *kana* letters in Miki and Nakagawa (1988) to transcribe the lines.

	Line	Position (in Poem)					Mora Position (in Line)						Vowel sequen
		1	2	3	4	5	1-2	2-3	3-4	4-5	5-6	6-7	
1	awamu tozo omofu					x					x		o-o
2	kurenu to omoheba					x			x				o-o
3	mono wo koso omohe					x				x			o-o
4	taki no oto wa	x						x		--	--		o-o
5	awamu tozo omofu					x				x			o-o
6	mono wo koso omohe					x				x			o-o
7	mono omofu koro wa		x				x						o-o
8	yo wo omofu yueni					x	x						o-o
9	toma wo arami			x				x		--	--		o-a
10	kokoro araba			x				x		--	--		o-a
11	kokoro ateni	x						x		--	--		o-a
12	osiku mo arukana					x				x			o-a
13	tatazu mo aranamu					x			x				o-a
14	hana no iro wa	x						x		--	--		o-i
15	arasi to ifu ramu					x			x				o-i
16	kaze wo itami	x						x		--	--		o-i
17	okono isi no			x				x					o-i
18	tago no ura ni	x						x		--	--		o-u
19	o no ue no sakura		x				x						o-u
20	uchi idete mireba		x					x					i-i
21	kogi idenu to			x				x		--	--		i-i
22	haru no no ni idete		x							x			i-I
23	machi ide tsuru kana					x	x						i-i
24	yado wo tachi idete		x					x					i-i
25	kogi idete mireba		x					x					i-i
26	ariake no tsuki wo				x			x					i-a
27	nusa mo toriahezu		x							x			i-a
28	ariake no tsuki to		x					x					i-a
29	meguri ahite	x						x		--	--		i-a
30	mine ni ofuru			x				x		--	--		i-o
31	na nisi owaba	x						x		--	--		i-o
32	chigiri okisi	x						x		--	--		i-o
33	aki ni wa arane do					x			x				a-a
34	yama orosi yo			x				x		--	--		a-o
35	more izuru tsuki no				x			x					e-i

Shaded columns indicate five-mora lines.

Miller also analyzes the positioning of the metrically irregular lines in *Bussokusekika* and concludes that the metrically irregular lines occurred in the third-line position. However, if we look at the Table 3, the distribution of *ji-amari* lines in *Bussokusekika*, the *ji-amari* line appears everywhere except the line 4. Furthermore, as I show in Table 2, its distribution is rather random

in *Hyaku-nin Isshu*. Thus *ji-amari* has nothing to do with the structure of Japanese poetry. It is rather a phonological (or morphophonological) phenomenon.

Table 3

Poem	Line 1	Line 2	Line 3	Line 4	Line 5	Line 6
1.	X		X		X	X
2.	X				X	X
3.			X			
4.	X	X				
5.			X			X
6.			X		X	X
7.		X	X			
8.	X					
9.	X	X				
12.						X
13.			X			
14.	X	X				
16.	X					X
17.	X					

Cranston (1993) and Miller (1975) suggest that *ji-amari* is an instance of synaloepha or crasis wherein two vowels elide into one. In *Hyaku-nin Isshu*, there are 91.4% *ji-amari* (32 out of 35) lines that start with either [o] or [i]. Miller also has found that the [i] + [a] sequence appears to be the dominant combination of *ji-amari*. He also states that most of *ji-amari* lines in Old Japanese verse start with either [i] or [o]. The phenomenon of *ji-amari* involves initial vowel ‘glidelization,’ i.e., the first vowel becomes very close to a glide, and then it loses vocality when the line is recited. If *ji-amari* were really an instance of synaloepha as Miller has analyzed, both vowels would lose their quality and change into one. For example, the word ‘*ariake*’ in the line 26 and 28 in Table 2, should be pronounced as [areke], following his analysis. We would never understand it as ‘*ariake*.’ Needless to say, if it is [aryake], although a mora is decreased, a substitute phoneme is there for the listener to recognize it would be ‘*ariake*.’ Therefore, I suggest that *ji-amari* is an instance of glidelization of the initial vowel. The irregular lines which have an extra mora fit into the *Tanka* formation rules.

CONCLUSION

5. I have offered an analysis of Japanese meter based on examining one hundred *Tanka*. Since each Japanese verse line is recited with eight beats, I have attempted to find the position for the pauses and illustrated the metrical hierarchy. Also, even *ji-amari* lines – lines containing an extra mora – fit into this unmarked structure.

Japanese meter is completely independent of its pitch-accent, as the rhythmic system and the tonal system are independent in Japanese. Therefore, it is totally quantitative, and it is moraic tetrameter.

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