

## THE TWO-MORA FOOT IN JAPANESE -TANKA RECITATION BY THE REIZEI FAMILY-

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### ABSTRACT

Existence of a foot consisting of two morae in Japanese has been suggested by several linguists. However, it is very difficult to prove it phonetically in modern Japanese. I examined the very slow *tanka* poetry recitation orally handed down in the Reizei Family since the twelfth century, and found that there were two-mora units with the second mora prolonged.

### 1. INTRODUCTION

The basic rhythmic unit in Japanese is the mora. The mora coexists with larger units such as a word in prose [1], a poetic line [2], and a group of lines in *tanka* poems [3]. Although existence of a foot consisting of two morae in Japanese has been suggested by several linguists, it is not easy to prove its existence phonetically. Bekku[4] claimed that the rhythm of Japanese is made of quadruple time, and one beat of this quadruple time is a two-mora foot (p. 52). But his explanation has no experimental support. Poser [5] introduced Teranishi's experiment [6]. According to his experiment, "as the tempo decreased odd-numbered morae (counting from the beginning of the word) changed little in duration, while even-numbered morae lengthened considerably" (Poser [5], p. 80.) Another experiment is necessary to examine these findings in detail. The purpose of this paper is to investigate the very slow *tanka* recitation by the Reizei Family, and try to find evidence of a foot in Japanese which modern Japanese may have lost.

### 2. EXPERIMENT

#### 2.1. Methods

I used a copy of a tape of *tanka* recitation recorded by Mrs. Fumiko Reizei and her father, the late Count Tametsugi Reizei. The Reizeis are called the "Family of Poetry," because they have produced great *tanka* poets and

preserved precious documents and ceremonies including *tanka* recitation for eight hundred years.

*Tanka* were recited at poetry contests where court poets competed publicly on prescribed topics. The recitation was called "*Hikoo*." Minegishi [7] wrote that the poetry contest had its golden age in 880-1230 A.D., from the *Heian* to *Kamakura* Periods. *Hikoo* is still adopted at the annual *tanka* competition held at the beginning of the year at the Imperial Palace, and also at the Reizeis' *tanka* competition parties held four times every year on special occasions.

There are three styles of recitation. One is prose style reading, and the others are song styles with two different melodies. I have chosen the prose style without melody.

The recorded *tanka* was from the *Kokinshu*, *Collection of Poems Ancient and Modern*, the first Imperial Anthology (c. 905 A.D.). This *tanka* is the original of the Japanese national anthem. It is composed of thirty-two morae, in 5-7-6-7-7 morae lines.

Waga kimi wa (5)  
Chiyo ni yachiyo ni (7)  
Sazareishi no (6)  
Iwao to narite (7)  
Koke no musu made (7)

(May our friend endure,

A thousand, eight thousand ages:

Till the smallest pebble grows

To a boulder etched with moss[8].)

#### 2.2. Measurements

Wide-band spectrograms of the prose style readings by Mrs. Reizei (F.R.), her father (T.R.), and myself (Y.H.) were made with a Kay-Sonograph (5500). I measured the duration of each segment, mora, foot, line, and pause.

#### 2.3. Results

##### 2.3.1. Line duration

Figure 1 shows the comparison of the duration (ms) of the five lines read by the three speakers. The line duration

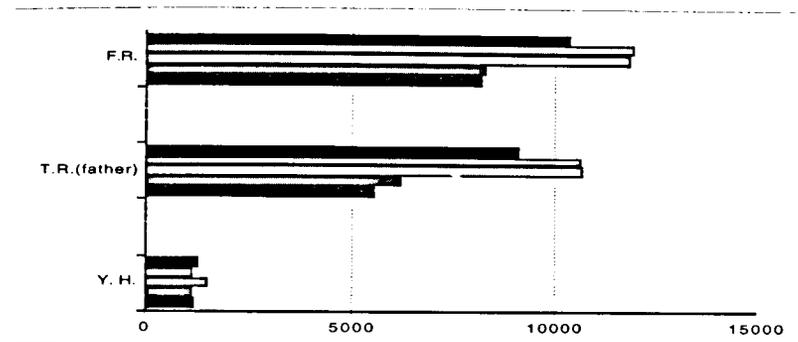


Figure 1. Comparison of the line duration(ms) of the three speakers.

includes pauses except for the last line.

The pause after each line was considerably long, especially in the Reizeis, as seen in Figure 2 on the next page.

The tempo was very slow; more than seven or eight times longer than my reading of the same *tanka*. The respective durations of the poem by F.R., T.R., and Y.H. were 50,484 ms, 42,095 ms, and 6,065 ms. The duration of lines including pauses was quite equidistant for Y.H., like my previous experiments in modern Japanese prose style reading[3], and not so much for F.R. and T.R.

#### 2.3.2. Mora and foot duration

(1) The Reizeis' style of reading

Table 1. Mora duration (ms) of F.R.'s first line.

	1	2	3	4	5
Mora	250	775	420	680	4560
Foot	1025		1100		4560

If a word is composed of two morae as in Table 1, even-numbered morae were clearly longer than odd-numbered ones. Figure 3 illustrates F.R.'s first line.

However, if a word is composed of five morae as in *sazareishi* in Table 2, there are two ways of foot formation.

Table 2. Mora duration of F.R.'s third line.

	1	2	3	4	5	6
Mora	250	810	515	435	890	3770
Foot(A)	1060		950		4660	
Foot(B)	1060		515		1325	3770

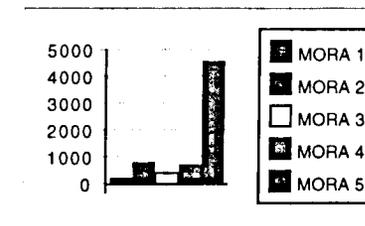


Figure 3. The mora duration (ms) of F.R.'s first line.

In Foot (A), the second mora of the second foot "i" is shorter than the first mora "re." *Sazareishi* (a pebble) is a compound noun, and there is a morpheme boundary between "re" and "i". In Foot (B), the second foot has only one mora, and therefore, is very short. However, syntactically and semantically we prefer Foot (B). This means that foot formation respects syntax, or meaning, and the two-mora foot is easily collapsed by syntactic boundaries, as seen in Figure 4 of F.R.'s third line.

Line 4 has a three-mora word "iwao" (a boulder). But as the next "to" (to) is a postposition, *iwao to* is naturally divided

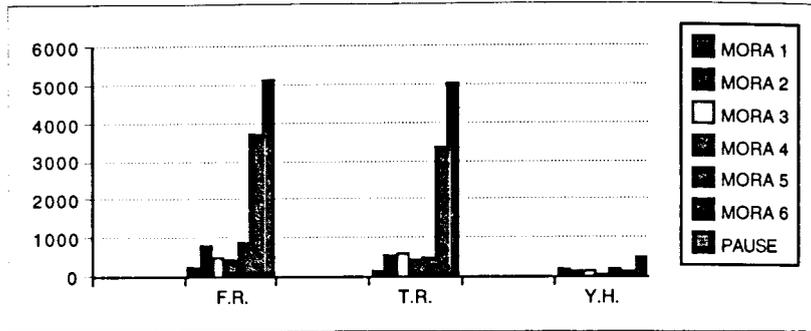


Figure 2. Comparison of the mora duration of the third line.

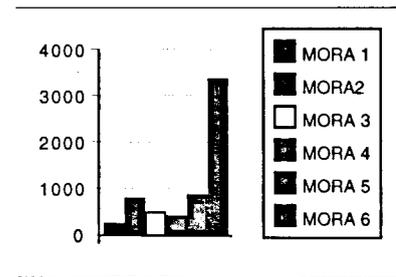


Figure 4. The mora duration (ms) of F.R.'s third line.

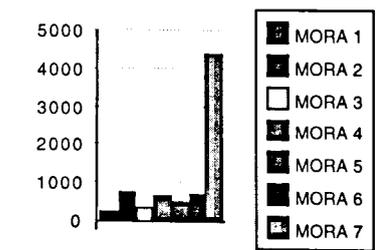


Figure 5. The mora duration (ms) of F.R.'s fourth line.

into two feet of *iwa* and *oto* as in Figure 5 of F.R.'s fourth line.

(2) Modern style of reading

Table 3 is Y.H.'s mora and foot duration of the third line.

Table 3. Mora and foot duration (ms)

of Y.H.'s third line.

	1	2	3	4	5	6
	sa	za	re	i	shi	no
mora	190	175	165	55	215	160
Foot(A)	365		220		375	
Foot(B)	365	165	270	160		

In the duration of the first foot *saza*, the second mora *za* is shorter than the first mora *sa*. The mora in modern Japanese is said to be an abstract isochronous unit of timing [1], and so is the foot in modern Japanese. The foot may be abstract, too. Figure 6 illustrates Table 3.

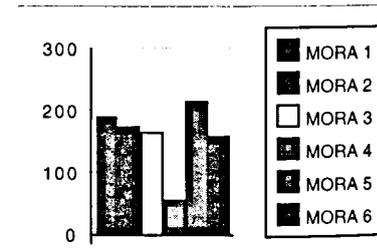


Figure 6. The mora duration (ms) of Y.H.'s third line.

In my previous experiment in modern Japanese [9], the second mora was also shorter than the first mora, as seen in Table 4 and Figure 7.

Table 4. Mora duration (ms) of Y.H.'s seven-mora line[9].

	1	2	3	4	5	6	7
	ha	na	no	chi	ru	ra	n
Mora	131	116	132	163	116	133	83
Foot	247	132	279	216			

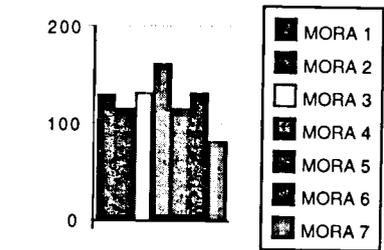


Figure 7. The mora duration (ms) of Y.H.'s seven-mora line[9].

### 3. CONCLUSION

The results revealed the following points in the Reizei's recitation:

- (1) The tempo was very slow; more than seven or eight times longer than my reading.
- (2) The duration of the lines including pauses was, by and large, kept equidistant, but not as equal as in the modern prose style reading.
- (3) The second mora was longer than the first mora, if there was no syntactic boundary between them.
- (4) Extremely long prepausal lengthening was observed in the last vowel of each line.

In modern Japanese, to find acoustic evidence for foot structure is difficult. Like the mora, the foot might be an abstract isochronous unit of timing, not appearing on the surface. However, in the very slow *tanka* recitation by the Reizeis, there were two-mora units with the second mora prolonged, although they were easily collapsed by syntactic boundaries. This might be a piece of evidence for a two-mora foot in Japanese.

### ACKNOWLEDGEMENT

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