

The Pronunciation of Japanese Words in English Sentences*

Hiroshi Yamashita

1. Introduction

With the world becoming smaller and smaller, the opportunity to interact with people with different culture is getting more and more frequent than ever. Not only do we visit other countries more often than we used to before, and more people are coming into Japan. Many companies are exporting products overseas or producing them in foreign countries. As a result, vocabularies of foreign nature are coming into our language. Incidentally, we are also exporting OUR words to other countries.

In these cases, how to pronounce these newly-introduced words becomes important. This becomes even more crucial when the two languages in question have different phonological systems. For example, while at least some of the Japanese lack nuclear stress, such a stress pattern never appears in English. (We will call such stress system, level accent system.) All English words, with exception, have stress on one of their syllables. An interesting question is, i.e., where do they put nuclear stress if such Japanese words with no nuclear stress are used in English?

Furuno (1995) has deliberately examined Japanese words in some of the English-English dictionaries published and used in the United States and found out that most of such words take penultimate accent, with exceptions. Note that she deals only with Japanese words used by American and British people unfamiliar with Japanese and never handles cases where

familiar with the language.

In this paper, we will see whether native speakers of English who come to Japan share the same stress pattern with those foreign national Japanese for a long period of time when Japanese words and names are actually English sentences. We will divide our subjects into two groups depending on the length of their stay in this country; the first group consists of those who have lived in Japan so long (Data A below), and the second group is made up of those who have been living in Japan for a long period of time and thus having much contact with Japanese culture (Data B through H).

We have chosen three programs with four personalities appearing. A speaker of English, NNN's Kyou-No-Dekigoto belongs to the former group in the above paragraph. The other three personalities on TBS's Nyuusu-No-Mori and Inter FM's Midnight Express belong to the latter.

2. Mora-System and Stress-System

One of the issues that needs to be mentioned before we proceed is whether we should use syllable structure or mora structure in describing the data. The mora is described as a substructure of a syllable and its existence is unique to certain languages as Japanese and Korean.

Members consisting of double vowels are summed up as a single syllable but can make up a single mora. Furthermore, /n/ in (c) V« + /n/ can also be a single mora. To make a shortcut, let us see some of the examples. For convenience, I will use M for moras and S for syllables:

- (1) a. S S
 2 2
 M M M M
 | | | |
 To u ky o
- b. S S
 2 2
 M M M M
 | | | |
 Ka n sa i

The Pronunciation of Japanese Words in English Sentences

(2) S S S S
 | | | |
 M M M M
 | | | |
 A me ri ka

In both examples in (1), the number of moras is four while that of syllables is two.

There is evidence that moras play an important role in Japanese. To see this in detail, let us now go on to the example in (2). The number of moras in this example is the same as that in (1a) and (1b). The number of syllables in this example, on the other hand, is half as that in (1a) and (1b). The fact that the same amount of time is needed to produce these words is the same in all the examples in (1) indicates that the length of Japanese words are determined on the basis of the mora system, not on the basis of syllable system.

Another evidence for the existence of moras in Japanese is at hand here. When foreign words are imported to Japanese, the nuclear stress must be assigned to a certain position in the words and it is only after we introduce the mora system that we can uniformly capture the stress pattern of these imported words. To see this, let us first consider a case where the number of moras and that of the syllables are the same.

(3) S S S S S
 | | | | |
 M M M M M
 | | | | |
 ka fe te ri a

This example cannot determine whether it is the mora or the syllable that plays the important role in stress assignment. However, when we look at cases where the number of moras and that of the syllables are different, we soon notice that the position of nuclear stress is determined on the basis of the mora system.

(4)

S	S	S
	2	
M M		M M
su ka		n ku

This example, combined with (3), shows that stress is uniformly assigned to the third mora from the bottom. Such a generalization is possible only if we adopt a mora system. In contrast, a theory based solely on the syllable system does not allow us to make any such concrete generalization that truly captures the stress pattern of imported words.

3. The Data

In this section, I will solely provide the data I have collected. The first part is the position where nuclear stress is assigned. The words in it are those that are assigned the level accent even in English context.

A NNN Kyou-No-Dekigoto broadcasted in 1991

This is the Sports and News, translated by the Japan Convention Service under Caster Yoshiko Sakurai.

the incident of Kokusaikogyo Company is changing from tax evasion to tax evasion. Arrested is Yoshiaki Inoue, who was at that time Assistant Manager of the company. The other suspect is Ishibashi, who had already been arrested for... along with Kotani from Koshin

former President Masayama knew that the money will be handed to the two...

apartment in Akasaka in Tokyo

..Branch of Mitsui Bank

President Masayama knew that the money will be handed to the two.

Ishibashi and Motoyama...

The Pronunciation of Japanese Words in English Sentences

Peru's President-elect A. Fujimori visited Kumamoto
met with Mayor Hosokawa, who then spoke briefly about his feeling
songs of Keiko Shuzenji and Hibari Misora
his uncle, Tomiya Imamoto, as well as his mother's younger brothers.
He left Narita International some time after six this evening...

NNN's Hiroo Kurosawa has more on...

The Minister of Agriculture Fumio Yamamoto reported on...

Foreign Minister Taro Nakayama spoke about...

A man was killed ~~saka~~ recently by a member of a gangster group,
Yamaguchigumi.

the man, Akira Yamashita, was ...

a member of Nihon Denden Corporation

the Director of the Tokyo Environmental Research ~~arch~~ Institute, Kane
died...

at a hospital in Fujisawa, Kanagawa Prefecture.

The Hanshin Tigers, Kawai, the Yomiuri Giants, Komada, Tomari
Hiroawa, Matsumoto, Kawasaki, Keisuke Nishimoto, Hiromitsu Ochia
Ishimine, Nakayama, Hattori, ~~Koshien~~ Stadium, the Hiroshima
Carp

B TBS Nyusu-No-Mori broadcasted on May 16, 1997

Good evening for Hideo Sugio and Rie Kadowaki, I m...

two most influential Nomura Securities board members,

Hiroshi Yamashita

former Nomura Chairman Setsuya Tabuchi and
former Nomura President Yoshihisa Tabuchi
when Ryuichi Koike, who was arrested yesterday,...
when Nomura was investigated...
searched the homes and offices related to sokaiya racketeer, Ryuichi
Nomura Securities Osamu Fujita for a payoff
Koike s younger brother, Yoshinori
searched the offices of Kojin Building in Roppongi, Tokyo.
Nomura Securities Nobutaka Fujita repeatedly asked Matsuki to
introduce Koike to...
JNN s Jun Mashimo reports.
Chief Cabinet Secretary Seiroku Kajiyama said he will...

Composer and music producer, Tetsuya Komuro, ranked 4th.
Among the novelists and writers, Yasuo Uchida topped the list.
Novelist, Jiro Akagawa, who maintained the 1st place for 13 years.
Among singers, Fumio Fujii, who ranked 11th last year,...
Keisuke Kuwata, who topped the list last year,...
Yumi Matsutoya, who ranked 2nd last year,...
However, Masanori Hamada topped the list this year rather than
Matsumoto.
Baseball player Hiromitsu Ochiai, who was transferred to Nippon Ham.
Bluewave s Ichiro Suzuki moved up from 10th place to 2nd place.
Lower House member Tazuna Matsumoto, President of (the) drug store cl
Matsumotokiyoshi, topped the list.
alter pachinko machines to have...
In Kanagawa Prefecture s Atsugi City,...
Osaka Police arrested...

The Pronunciation of Japanese Words in English Sentences

Defendant Hisako Ishii once served as (the) cult s Finance Minister.
described her former guru, Shoko Asahara, as an ordinary man...

maline observation vessel, Mirai, meaning future .

The representative of the DemocNatio Ranty, today asked
Agriculture Minister Fu Takao, to review the...project of Isahaya
Bay.

Toshikatsu Matsuoka and five other members...make up the group.

The body of a man from Hokkaido, who ve been missing since last D
when the mudslide hit the Yamahara valley, (was found today).

the border between Niigata and Nagano Prefectures

The body of Kazuhiko Fujiya from Hokkaido s Taisei township...

Niigata Prefecture s Itoigawa City

Komusubi Kaio

In Okayama Prefecture

C TBS Nyuusu-No-Mori broadcasted on May 19, 1997

investigation into Nomura Securities scandal

arrested sokaiya Ryuichi Koike

huge sum of loans from Daiichi Kangyou Bank

Daiichi Kangyou Bank s Roppongi Branch

to Kojin Building

Koike s younger brother, Yoshinori

a pachinko polar in Saitama Prefecture

Hiroshi Yamashita

in Asaka City in Saitama Prefecture

a company employee, Kazuki Tanabe, was (killed)

a junior high school girl, Michiyo Urakubo, of Tsukigase Village

the distance between Ogori, Yamaguchi Prefecture, and Wakkanai, Hokkaido
Japanese movie Unagi, or eel, Shochikuza was awarded
the...Prize

actor Koji Yakusho, who received the award on behalf of Imamura,..

Togi township in Ishikawa Prefecture

The missing man is 47 year-old Takeshi Terakoshi.

the Niigata Branch of M.S.A.

the Kanazawa Branch of the M.S. Bureau

Yokozuna Akebono, falling behind Yokozuna Takanohana, matched against
Tomokasuga.

Tomonohana added another loss.

Kaio suffered his 3rd loss.

Kushiro, Hokkaido, announced today blossoming of cherry blossom their
first announcement in Okinawa.

D TBS Nyuusu-No-Mori May 20, 1997

live report from Shibuya Police Station.

payoff scandal involving Nomura Securities Company

Daiichi Kangyou Bank is now at the center of investigation

which extended loans to sokaiya real estate company.

The Pronunciation of Japanese Words in English Sentences

JNN's Jun Mashimo has more...
between Koike and the bank
which had connection with Yoshio Kodama.
when non-bank Daiwa Shinyo extended loans to Kojin Building
executives Daiichi Kangin, including...
top Daiichi Kangin executives and Koike.
Chief Cabinet Secretary Seiichi Kajiya said...
Kajiya announced that...
Justice Minister Isamu Matsuura, Agriculture Minister Takeshi Fujimoto and
Post and Telecommunication Minister Hisao Horinouchi
at its Shinjuku Branch in Tokyo

Tokuji Wakasa, who is 82 years old,...
President Seiji Fukatsu had confederation with Wakasa...
Chairman Takaya Sugiura, who is also a former bureaucrat,...
LDP Secretary General Koichi Kato, responding to criticism from...,
will meet with Transportation Minister Makoto Koga.

A 10 year-old Kenta Nakai had his hand caught...

A Shinshinto member says...

JNN's Katsuto Yokota reports...

Residents of Unzen, who were the victims of the eruption of Fugen Pe
was named Heisei Shinzan last year.

Yokozuna Akebono was matched against Sekiwake Tosanoumi.
Akebono defeated Tochinoumi. (slip of the tongue here)

Hiroshi Yamashita

High school teacher-turned Tomonohana added another win.

Komusubi Mushouyama...

Leading the tournament is Yokozuna Takanohana.

E: TBS Nyuusu-No-Mori broadcasted on May 21, 1997

The Nomura Securities payoff scandal

within Daiichi Kangyo Bank

loans extended to sokaiya racketeer

loaned 3.1 billion yen to sokaiya racketeer Ryuichi Koike.

its affiliate firm, Kankaku Security

yet to be completed in Yamanashi Prefecture.

Police officer, Masahiko Yamazaki ~~Top of Police~~ Station and

officer, Ryuichi Akamatsu, who are both dismissed in disgrace

today.

Former police Sergeant Nobuyuki Kawaguchi and another 34 year-old man

were...

Miki township in Kagawa Prefecture

shortly past one a.m., pachinko polar manager, Katsutake Yamamoto,

found himself surrounded by...

Tokyo's Shibuya Ward

having strangled to death Watanabe, an employee at Tokyo Electric

Power Company.

(a group) supporting the Isahaya reclamation project in Nagasaki Pref

fierce debate with Naoto Kan, the co-leader of the Democratic Party c

The Pronunciation of Japanese Words in English Sentences

On day 11th of the Summer Grand Sumo ~~Yokozuna~~ Akebono was matched against No. 1 Maegashira Kotonishiki.

No. 2 Maegashira Sasayutaka is following behind, while Kaio lost his bout against Ozeki Takanonami.

Yokozuna Takanohana managed to keep one-loss record, followed by Yokozuna

Akebono with two losses.

home for the elderly in Maebashi, Gunma Prefecture.

F: TBS Nyuusu-No-Mori broadcasted on May 22, 1997

Good evening for Hideo Sugio and Rie Kadowaki, I m...

Honorary Chairman, Wakasa

The President of Takashimaya Department Store

loans to sokaiya racketeer

is Daiichi Kangyo Bank

arrested sokaiya, Ryuichi Koike,

purchased shares in Nomura Securities

such companies as Sony, Honda, and Toyota

an official from Toyota Motors

in the Yatsugatake Mountain Range in Nagano Prefecture

the body of the pilot, Ichiro Nakadai, was found

in Tokyo's Shibuya

murder of Yasu Watanabe, an employee of Tokyo Electric Power

Hiroshi Yamashita

Company,
visited Teshima Island in Kagawa Prefecture
Junior high school students from Nagoya in Aichi visited the city.
The Kagawa Prefectural Government...

the hearing of Aum Shinrikyo leader, Shoko Asahara, was held
the murder of Yokohama attorney

of Fukuoka Airport

the border of Fukushima, Gunma and Niigata Prefectures

claim rights of the Senkaku Island

Sekiwake Tosanoumi was matched against Yokozuna Takanohana.
the Yokozuna was dsclared the winner.
Tomonohana scored his 5th win.
Sekiwake Kaio, who was injured yesterday,...

G: TBS Nyuusu-No-Mori broadcasted on May 23, 1997

Japan Red Cross in Kyoto Prefecture
at an Osaka Blood Center

The Daiichi Kangyo Bank is at the center of...

loans extended to sokaiya racketeers

the outgoing Presidebt, Katsuhiko Kondo

extended to sokaiya racketeer, Ryuichi Koike

loans extended to Koike

the Bank s Kojimachi Branch

the executives of Daiichi Kangyo Bank and Nomura Securities

The Pronunciation of Japanese Words in English Sentences

Nomura Securities former Chairman Setsuya Tabuchi and former President Hideo Sakamaki

Daiichi Kangyo Bank s advisor, Kuniji Miyazaki

LDP s Makiko Tanaka expresses doubt...

some LDP and opposition Shinshinto members

JNN s Kenichi Shimomura reports.

Former Aum Shinrikyo attorney Yoshinobu Aoyama appeared in court.

Foreign Minister Yukihiko Ikeda, visiting Russia, held talks with
Meeting between... and Prime Minister Hashimoto be held

Opposition Shinshinto Party leader Osamu Takeuchi spoke highly of Chief
Cabinet Secretary Seiichi Kajiya.

LDP Secretary General Koichi Kato.

Yokozuna Akebono with a record of 2 losses matched against Ozeki
Musashimaru with 3 losses record.

No. 14 Maegashira Konishiki won.

No. 5 Maegashira Oginishiki maintained his 3-loss record.

with two Ozeki

Sadanoumi lost and...

in mountainous region in Tokushima Prefecture.

4. The Analysis

In this section, we will make some analysis on the data presented
previous section. But, before we make an analysis of the data shown

Hiroshi Yamashita

previous section, we will see further data from a person with a long c
country.

4.1. Additional Data

The data below is taken from a radio program, but I am afraid I have
a tape-recording of the program. Thus, I cannot show you the context wh
Japanese words are used. However, when the data was taken, I have pa
attention to the phonolo-gical context in which these words appeared in
make sure that no phonological context has affected the stress pattern.

H Inter-FM Midnight Express broadcasted on May 22, 1997

Penultimate Accent	The Others
fu-ru- <u>sa</u> -to	<u>A</u> -ki-ko
sa-yo- <u>na</u> -ra	<u>Se</u> -ta-ga-ya
	<u>Yu</u> -ic-chi
	<u>Na</u> -ka-me-gu-ro
	<u>To</u> -shi-fu-mi
	<u>Su</u> -mi-ko
	<u>Sa</u> -e-ko
	<u>Ko</u> -da-i-ra-shi

4.2. Analysis of the Data

The data in B through H is taken from those who have stayed in Japa
long period of time. Note that the data in B through E and that in F
from two different persons, both having stayed in Japan for at least ter
speaker in H claims that he has lived in Japan for a long time and also
career at a Japanese university. He now works as a radio personality a

The Pronunciation of Japanese Words in English Sentences

and from his programs we can recognize that he can speak Japanese pretty well. The data in A is from a person with only a short career in Japan.

The above data shows that a person with less career in Japan (eg. speaker A) tends to put stress on the syllable that immediately precedes the final syllable (penultimate syllable) when Japanese words are used in English sentences. The ratio is as high as 75% in case A. Furthermore, the syllable with the nuclear stress is pronounced very prominently compared to other non-stressed syllables, making it very easy to determine on which syllable a stress is imposed. Another feature for such a speaker is that level accent structure never appears. These three features are widely prevalent among those who have never contacted the Japanese community, so it seems unnecessary to collect further data from speakers belonging to this category.)

The situation is completely the opposite for those who have stayed in Japan for a long time; i.e., Data B through H. They tend to put nuclear stress on the initial syllable, no matter how long the word may be. The ratio is above 90% in some cases and never fail to go below 70% in all the remaining. Furthermore, the nuclear stress is not as prominent as that of a new-comer, so I have often encountered difficulties in determining on which syllable a stress is imposed. Some words even have multiple nuclear stresses; such a phenomenon is unusual in English. Surprisingly, some cases show level accent structures, which are very common in Japanese but impossible in English.

Furuno (1995), examining some English dictionaries published and used in the United States and in Britain, points out that some words with three syllables or more can have either penultimate or antepenultimate accent. Thus the word *tempura* can be either *tem-pu-ra* or *tem-pu-ra*. But according to her data, it can never have the accent further above, such as to the initial syllable of four-syllable words or the second syllable of five-syllable words. So, it may be fair and even appropriate to conclude what is happening to long words with more than three syllables before reaching a final conclusion that those who have stayed in Japan for a long time tend to

stress on the initial syllable when Japanese words and names are used in English sentences. The result is summarized in Table 1.

	Penultimate Accent	Initial	Elsewhere/Level
A	26	1	2
B	6	20	0
C	1	14	2
D	1	12	3
E	1	17	4
F	0	13	3
G	0	17	2
H	2	4	0

This shows that those with a long career in Japan still put stress on the initial syllable even if the Japanese words have more than three syllables, confirming the conclusion of the previous section. This is the main conclusion of this paper.

5. Conclusion

We have seen in this paper that those who have lived in Japan for a long time tend to place nuclear stress on the initial syllable when Japanese words are used in English sentences. This contrasts sharply with those who have a short career in Japan, who mainly take on the penultimate accent pattern when such words are actually used in their conversation in English.

Although this conclusion sounds reasonable, we still need to conduct a diachronic survey as well to make it concrete, as Prof. Masaru Nakamura

The Pronunciation of Japanese Words in English Sentences

communication) pointed out for me. We are still in the midst of our two native speakers of English, but as far as we can say at this moment they are gradually moving towards shifting their position of nuclear stress from the penultimate syllable to the initial one although some sort of confusion remains.

Appendix

Recent development in the study of the second language acquisition reveals that UG can at least partially be used in the second language acquisition of adults. I even believe that it can be used fully, just as in the case of the first language acquisition.

But, there are still some who state that UG, once used in the first language acquisition, cannot work at all in the second language acquisition of adults. According to this hypothesis, it has been claimed that the Principles unused in the first language acquisition solely dies out and thus are unavailable for the second language learning.

The test to know whether UG can be used in the second language acquisition involves tests of the Principles of UG that are missing in the first language but present in the second language. If one can use the Principles in the second language appropriately, this means that UG can still be used after the acquisition of the first language. On the other hand, if he cannot, this leads to the conclusion that UG cannot be used in the second language acquisition. Needless to say, the Principles in the test that is present in the first language does not tell us as one may claim that the learner is simply applying the Principles available in the first language to the second language.

Although somewhat a different issue, we have seen that there are two differences between English and Japanese. One is the mora system and the other is the level accent structure. Both are present in Japanese but missing in English.

Hiroshi Yamashita

we can get the data which says that native English speaker can acquire structures, this can lend support, although indirectly, to the claim that unfamiliar in one's first language can still be used in the second language of adults.

Our data does not tell us anything on whether any of the native speakers saw in this paper actually use the mora system. However, we saw that speakers acquired the level accent system. This finding is, in my opinion, significant. What this means is that adults can still acquire something that is missing in their first language. This may also be true for the Principles of UG unused in the second language. We may be able to acquire the second language, just as our first.

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