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Title	A Survey of the Difference in Language Sensitivity Between Japanese and Americans : A Preliminary Study
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Citation	[岐阜大学地域科学部研究報告] vol.[16] p.[13]-[20]
Issue Date	2005-03-31
Rights	
Version	岐阜大学地域科学部 (Faculty of Regional Studies, Gifu University) / 岐阜大学地域科学研究科 (Graduate Course of Regional Studies, Gifu University) / 岐阜大学教育学部 (Faculty of Education, Gifu University) / University of Florida, Department of African & Asian Languages & Literatures / Salem International University, Department of Humanities / 日本大学生産工学部 (Nihon University) / 上智大学外国語学研究科 (Sophia University)
URL	http://hdl.handle.net/20.500.12099/4572

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A Survey of the Difference in Language Sensitivity Between Japanese and Americans: A Preliminary Study*

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(Received December 1, 2004)

1. Introduction

1.1 The Purpose

The Japanese language has three kinds of alphabets: Kanji (Chinese alphabets), Hiragana (Japanese alphabets made out of Chinese alphabets, and Katakana (another version of Japanese alphabets used mostly for loan words). Since English is a second language to most of the Japanese population, there are actually four different alphabets being used in Japan. On the other hand, the English language only uses Roman characters. However, native speakers of English whose second language happens to be Japanese recognize the three kinds of alphabets being used in Japanese as well as Roman characters. Therefore, the situation is the same to native speakers of Japanese whose second language is English and native speakers of English whose second language is Japanese in the sense that they can both recognize four different kinds of alphabets: Kanji, Hiragana, Katakana, and Roman characters.

The purpose of this paper is to research the difference in language sensitivity between Japanese and Americans. We very often see advertisements in English in Japanese society. Also, we sometimes see native speakers of English who are travelers to Japan wearing clothing which has Japanese alphabets on it. Our question is then what alphabet is the most appealing to native speakers of Japanese whose second language is English and native speakers of English whose second language happens to be Japanese. The research question is summarized in (1).

(1) Research Question

Which kind of alphabet among Kanji, Hiragana, Katakana, and Roman characters do Japanese and Americans prefer most as a design device?

To answer Research Question (1), we made a questionnaire asking one's preference for wearing a particular T-shirt out of the four T-shirts, each of which has a series of a different kind of alphabet with the same meaning. We obtained data from college students from Japan and the United States. Through a statistical analysis, we found that Japanese college students most preferred Roman characters, and American college students whose second language was Japanese, Kanji.

The results of this research are significant in the sense that (1) they will contribute to uncovering the nature of the minds of both Japanese and Americans, and (2) they will tell us what alphabet should be used most effectively to market to a particular nation in fields such as business.

1.2 The Organization

1.2 The Organization

The organization of this paper is as follows. Section 2 gives an overview of the materials and methodology of the present research. Section 3 analyzes the data, and Section 4 reports the results. Section 5 provides a discussion on the results, and Section 6 concludes the paper.

2. Materials and Methodology

Section 2.1 gives an overview of the materials used for the present research, and Section 2.2 states the methodology of the research.

2.1 Materials

First, we obtained the samples from university students both in Japan and the States. Two universities in each country participated in this project. We limited the samples to native speakers of Japanese whose second language was English and native speakers of English whose second language was Japanese. The names of the institutions and the number of the samples from the institutions are shown in (2).¹

(2) The institutions that participated in this survey

Country	Institution	Samples
Japan	Gifu University	247
	Nihon University	119
		366 (total)
U.S.A.	Salem International University	12
	University of Florida	49
		61 (total)

The other relevant information about the samples is shown in (3).

(3) The contents of the samples

	Japanese	Americans.
Total Number of Samples	366	61
male	219	31
female	147	30
age (- 19)	287	27
age (20- 29)	77	34
age (29-)	2	0

Second, we made a questionnaire for this research. The purpose statement of the questionnaire is shown in (4).

(4) Questionnaire

Suppose that you are a college student who comes across a university by the name of "Gifu University." (The university that you attend may or may not be Gifu University.) At a student meeting, a decision has been made to make a T-shirt with the university's name on it. The following 4 T-shirts were nominated for candidacy. Note that all 4

versions (Kanji, Hiragana, Katakana, and Roman characters) mean "Gifu University." On the following scale of 1 to 5, please express to what degree you would like to wear each T-shirt. (Please circle the number that is most appropriate.)

In the questionnaire, we asked the participant to indicate the degree to which s/he would judge each of the examples on the five level scale shown in (5).

(5) The Scale

- 1 strongly disagree
- 2 moderately disagree
- 3 neither agree nor disagree
- 4 moderately agree
- 5 strongly agree

The exact form of the questionnaire is provided in Appendix at the end of this paper.

2.2 Methodology

In this study, we used t-Test: Paired Two Sample for Means (hereafter, t-Test) of Microsoft Excel to analyze the data. We only used the data that marked either 4 (moderately agree) or 5 (strongly agree) on the scale. The level of statistical significance is $p < .05$.

3. Analysis

First, we obtained the results with respect to the preference for each of the four alphabets which Japanese and American college students showed. (6) shows the preference by Japanese students, and (7) by American students.

(6) Japanese

	Kanji	Hiragana	Katakana	Roman characters
Number of the Data	228	35	25	280
%	62	10	7	77
Rank	2	3	4	1

(7) Americans

	Kanji	Hiragana	Katakana	Roman characters
Number of the Data	54	26	23	23
%	89	43	23	38
Rank	1	2	4	3

(6) and (7) show that Japanese students preferred Roman characters the most (77%), and American students Kanji (89%) the most. The second most preferred alphabet was Kanji (62%) for Japanese students, and Hiragana (43%) for American students.

Second, we tested whether there was a statistically significant difference between the most preferred alphabet and the second most preferred alphabet by Japanese and

American students. For this purpose, we analyzed the data by a t-Test. First, we analyzed the data from Japanese students. (8) shows that there was a statistically significant difference between those who preferred Kanji and those who preferred Roman characters. Roman characters were shown to be statistically more preferred than Kanji by Japanese students.

(8) Japanese

	Kanji	Roman characters
Mean	0.62295082	0.765027322
Observations	366	366
t Stat	-5.283158592	
P(T<=t) two-tail	2.18805E-07	
t Critical two tail	1.966482159	

Then, we analyzed the data from American students. (9) shows that there was a statistically significant difference between those who preferred Kanji and those who preferred Hiragana. Kanji was shown to be statistically more preferred than Hiragana by American students.

(9) Americans

	Kanji	Hiragana
Mean	0.885245902	0.426229508
Observations	61	61
t Stat	5.771866907	
P(T<=t) two-tail	2.94408E-07	
t Critical two tail	2.000297172	

We also examined whether there was a statistically significant difference between males and females for each of the alphabets. However, there was no statistically significant difference found between the two groups for any of the alphabets.

4. Results

The results of the analysis are (1) that Japanese students preferred the four alphabets in the order Roman characters, Kanji, Hiragana, and Katakana, and there was a statistically significant difference between those who preferred Roman characters and those who preferred Kanji, and (2) that American students preferred the four alphabets in the order Kanji, Hiragana, Roman characters, and Katakana, and there was a statistically significant difference between those who preferred Kanji and those who preferred Hiragana.

This indicates that native speakers of the language tend to prefer the alphabet used in their second language. Therefore, for Japanese students, Roman characters are more appealing than the other alphabets used in Japanese, and for American students, Kanji is more appealing than Roman characters used in English.

5. Discussion

The result of this research is significant in two important ways.

First, it will contribute to uncovering the nature of the minds of both Japanese whose second language is English and Americans whose second language is Japanese. A survey of this kind has not been done thus far, and this is the first time that we were able to uncover the fact that Japanese college students, whose second language is English in most cases, preferred Roman characters as a design device more than the alphabets used in Japanese, and American college students whose second language is Japanese, preferred Kanji as a design device more than Roman characters used in English.

It seems to be natural for American students to prefer one of the three alphabets used in Japanese more than Roman characters, as the desire to be able to use (read and write) the alphabets may be one of the reasons for them to have chosen Japanese as their second language. On the other hand, English is an obligatory second language for Japanese students in most cases, and thus, it is not clear that Japanese students prefer Roman characters more than the other alphabets because of the fact that they desire to be able to use Roman characters. This seems to suggest that there are some other reasons why Japanese college students prefer Roman characters, and by making the reasons explicit, we may be able to uncover the nature of the mind of the Japanese. This research will thus contribute to the area of psychology.

Second, it will tell us what alphabet should be used most effectively to market to a particular nation in fields such as business. For example, the present research tells us that when the coop of a given university is about to produce and sell things such as a T-shirt with the university name on it, Roman characters rather than the other alphabets should be used in order to gain the most benefit.

Before closing, a note is in order. The present research is not conclusive, as the number of the samples from American college students whose second language is Japanese is far smaller than that of the samples from Japanese college students whose second language is English. In future studies, we need to obtain more data from American students.

Furthermore, the present research has not touched upon questions such as (1) which of the students' properties the preference for a particular alphabet is correlated with, and (2) what result will emerge if the data are obtained from American students whose second language is not Japanese. We would like to address these issues in the future research.

6. Conclusion

To conclude, the present research has provided an explicit answer to Research Question (1).

- (1) Research Question
Which kind of alphabet among Kanji, Hiragana, Katakana, and Roman characters do Japanese and Americans prefer most as a design device?

The answer is given in (10).

- (10) Answer
Japanese students prefer Roman characters most, and American students prefer Kanji most, as a design device.

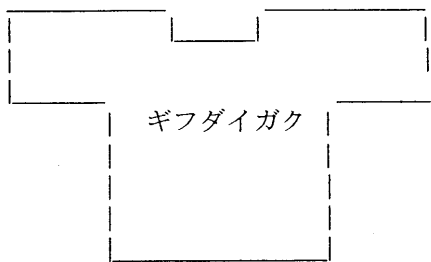
This indicates that native speakers of the language tend to prefer the alphabet used in their second language. Therefore, for Japanese students, Roman characters are more

appealing than the other alphabets used in Japanese, and for American students, Kanji is more appealing than Roman characters used in English.

Note

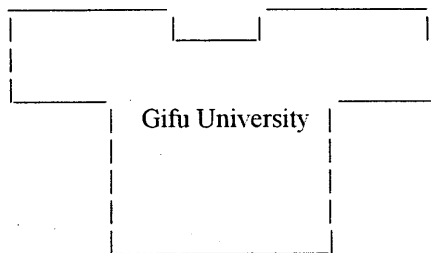
* We are indebted to Jessica Dunton for proofreading the draft of this paper.

1. The number of the samples from American college students whose second language is Japanese is very small, in contrast to that of the samples from Japanese college students whose second language is English. This is because the entire population of the college students in the States who are learning Japanese as a second language is far less than that of the college students in Japan who are learning English as a second language, and thus, it is very hard to obtain relevant samples from the States.



1.....2.....3.....4.....5

(Katakana)



1.....2.....3.....4.....5

(Roman characters)

Thank you very much for your cooperation. Hideki Maki