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KINETIC TYPOGRAPHY STUDIES TODAY IN JAPAN

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Abstract: The movement of Western Kinetic typography had started in the late 1990's while Japanese kinetic typography appeared from 2007. Japanese kinetic typography just seems to have started late or has been developing very slowly. The reason requires consideration from various angles. In this study, the writer researched on the reasons why Japanese kinetic typography could not have been active, taking the Japanese language characteristics into consideration. The writer also studied the careful points and its potential when producing Japanese kinetic typography.

Keywords: *Kinetic typography, Typography, Japanese characteristics*

1. Introduction

When searching for "kinetic typography" as the keyword, ten papers were appeared on CiNii(Citation Information by NII), which is the information database of art and science managed by NII (National institute of infomatics) ,as of January 2012.

Kinetic typography is used as a key word in eight papers except this author's.

The articles about educational experiments and application of Japanese kinetic typography in design education were written between 1998 and 2001, and most of them were presented by the Japanese Society for the Science of Design. On the other hand, when searching for "MOJI animation (character animation)" as a key word, eight articles appear on CiNii. Two of the papers were about substitutes for sign language for elderly people and hearing-impaired people. One of articles was written in 2004, and the other was written in 2005. It was between 2007 and 2011 when the movement on kinetic typography itself was focused and most of articles were presented by Information Processing Society of Japan.

Mitsuru Minakuchi(2005, 97p) explains, "MOJI animations are the methods to express character information like pictures because it can change the point of view of the character and the size as time goes by. They have been used in various ways in movies, television programs and games in recent years. MOJI animations can express implicit meanings with the move. Therefore, they are expected to be used for text-based communication. They are also expected to be used as information visualizing methods and help someone make choice". In addition, the key word, "kinetic typography", has appeared a lot in the title of papers written in English. Therefore, it can be said that MOJI animation is Japanese kinetic typography. In this research, I would like to consider why the production of Japanese kinetic typographies and studies started so late.

2. Methodology

This paper reviews the utilization possibility of kinetic typography which involves visual functions, linguistic functions, musical rhythm, and visual rhythm in the new environment of media. In Japan, kinetic typography is to be studied barely and the field is also unpopular. But the writer's preliminary research (Lee, 2010), about the recognition of kinetic typography with Japanese targeted for 225 Japanese university students, found utilization possibilities of the kinetic typography in the new media. And the students who saw kinetic typography for the first time, were impressed by the graceful movie screens filled (the recognition of kinetic typography was calculated using and KJ method, Chi-square tests, and the SD method). Based on the understanding about the utilization possibilities of the kinetic typography, it was proposed that the measure of the emotional disparity of typography, based on the AVSM (Affective Value Scale of Music), can be used for kinetic typographies and also for printed typographies according to the writer's preliminary studies.

In this study, the writer researched on the reasons why Japanese kinetic typography could not have been active, taking the Japanese language characteristics into consideration, conducting a literature review.

3. Characteristics of Japanese

3.1. A lot of number of characters

First of all, we can say that having a large number of Japanese characters is one of the reasons why the activation and study of kinetic typography in Japan has delayed.

Michio Miyazaki(2010, 10p) explains, "For Japanese font designs, at least 3000 characters are needed for use. At least 8000 characters are required for printing industry, and 12,000 -20,000 characters are needed for printing without any trouble.

According to MURATA Tadayoshi（1999）the number of everyday use Kanji(Chinese character) is within 2800. It can also cover 99 percent of Kanji that are in common use.

Though the Roman alphabet has only twenty six characters, Japanese needs at least 3000 characters as one set. When five kinds of font family (Regular, Italic, Medium, Bold and Extra Bold, etc) have to be prepared, English can be covered with 130 letters, but Japanese needs 15000 characters at least. That is 115 times as many as the English. It is clear why it cost more and took more time in the Japanese language to develop kinetic typography.

From the example (ex1, ex2) from the study of Kinetic typography in 1998, we realize that there is the limited number of fonts. That means that the authors in those days did not have a lot of options when choosing fonts. The authors had no choice but choosing fonts from the limited number of fonts available. Unsophisticated fonts were used. It could be said that it was difficult to elicit the attractiveness of typography because there were not many kinds of fonts in the Japanese language, whereas English had a large variety of fonts.

Figure 1. Mikami Noriaki (1998 p97) Student's work

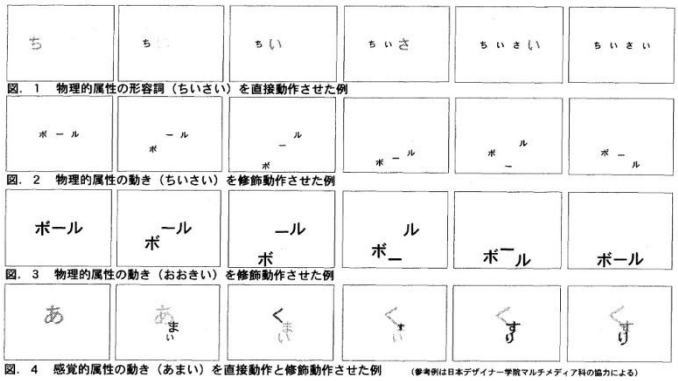

Figure 2. Uekita Uasufumi (1998 p95) Student's work

These problems have been solved gradually with technological developments. A large number of Japanese fonts are available on computers nowadays. However, as of December 2011, on Adobe Flash, there have been only several occasions where people could use Kanji with Kinetic typography without any trouble except Mincho and Gothic.

3.2. Coexistence of various scripts

The Japanese language is unique because of the coexistence of phonogram and ideogram. *Kanji, Hiragana, Katakana*, the Roman alphabet, and Arabic numerals appear in Japanese sentences.

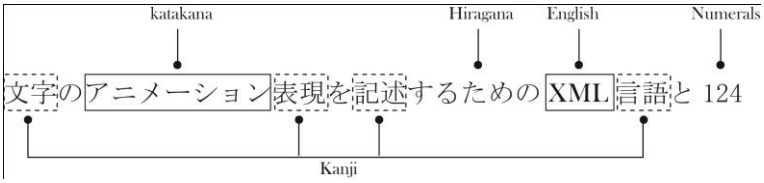

Figure 3. A Japanese sentence with *Hiragana, Katakana*, English and Numerals

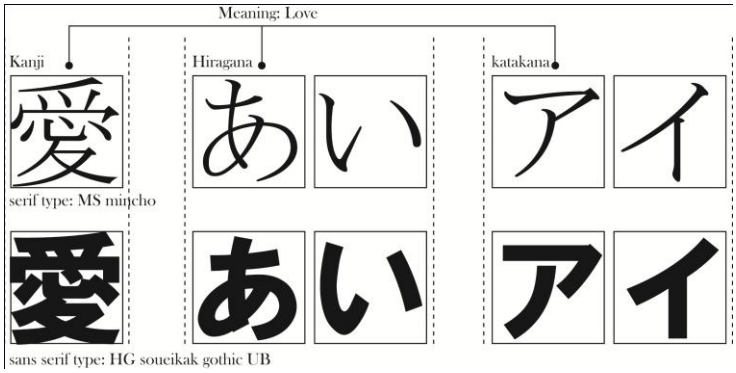

Figure 4. 3 kinds of Japanese which means love: *kanji, hiragana and katakana*

3.3. Many ways to pronounce

Not only *Kanji, Hiragana, Katakana* and the Roman alphabet coexist, but there are also many cases where one *Kanji* can be pronounced in different ways in japanese. The same *Kanji* can be used for a person's name and a name for a location. However, the *Kanji* can be pronounced differently. A successful communication is occured when the written *Kanji* is not only understood but also pronounced correctly.

Therefore, ruby characters are used in vertical writing and in horizontal writing. Ruby characters are normally placed to the right of a letter in vertical writing and they are placed above a letter and in horizontal writing.

The term “Ruby” is originally from the U.K. The size of the roman type with a height of 5.5points, which was called ruby, was used for Furigana or Yomigana in Japanese as NO.5 type.

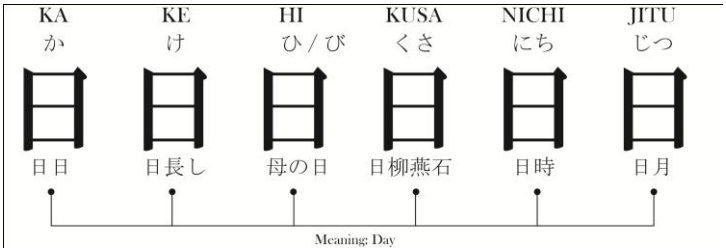

Figure 5. Different Pronunciations of one *kanji* which means Day (the way to read)

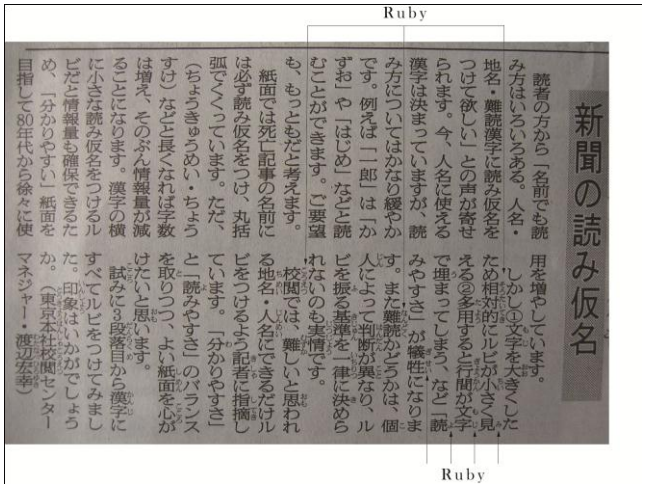

Figure 6. Ruby on a newspaper Asahi Shimbun, September 25th in 2006

3.4. Various ways to write

In addition to the use of ruby, people use different kinds of scripts to express the same meaning. Some use *Kanji*, while some use *Hiragana* or *Katakana*. The reason is that Japanese people feel each script has a difference in nuance. For example, one type of script is used to place emphasis, whereas the other is used to show politeness.

Figure 7. Even if dennwa(telephone) of a keitaidennwa(the cellular phone) is eliminated, it connects as the meaning of the cellular phone in Japanese. People write that by *hiragana* and also *Katakana*.

3.5. Difficulties caused by small letters and characters

Another problem for kinetic typography being delayed in Japanese is the resolution on displays. With low resolution, it is hard to see the difference between Dakuten and Handakuten, such as パリ, バリ, ば

ぱ/ばandパ) Furthermore, it is difficult to read when it comes to *Kanji* that have a lot of strokes because they look like black circles or squares.

Figure 8. Dakuon (Japanese voiced consonant mark) and Handakuon (Japanese semi voiced consonant mark)

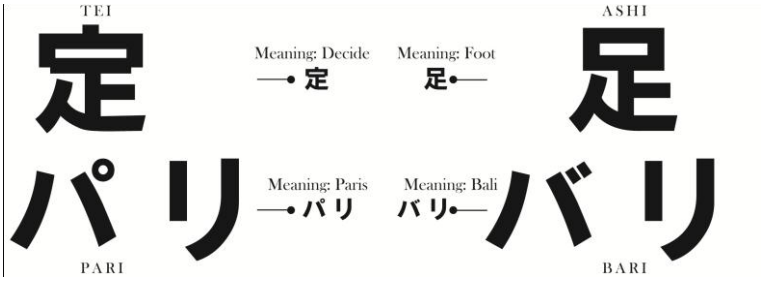

Figure 9. When Japanese character with a lot of number of strokes is used small, it can't be classified. And Dakuon and Handakuon also cause the same phenomena of language.

4. Turning point

There were a lot of problems that had to be solved in terms of legibility, comprehensibility and visibility because of those five unique Japanese language characteristics as stated above. Therefore, it is inferred that it was difficult for the letters to move on the monitor from the 1980s to the 1990s. Those problems caused by Japanese unique characteristics started to be solved gradually from 2000.

Although the number of letters and characters is still high despite the digitization, it can be said that the working time and expenditure could have been reduced compared to the time when people worked with their hands. What is more, Kinetic typography in the Japanese language has shown its potential due to the availability of devices such as resolution on display.

4.1. The appearance of opentype

The phototypesetting that Ishii Shigeyoshi and Morisawa Nosbuo achieved continued the prime for a long time since 1924. Shaken, Morisawa and Ryobi were the leading phototypesetter manufacturers in the Japanese market. However 1980s was the time period between the analog and the outline font era, and bitmapped font was invented and spread with the progress of computers in the late 1980s. Outline font was appeared The price of the typeface was about 20,000 yen for ATM. With a sharp reduction in prices, a large number of different typefaces appeared and the DTP situation in Japan made rapid progress. In 2001, a new font format called OTF (Open Type Font: TORINOUMI Osamu,2010) appeared and replaced CID. In 2002, Font Works released LETS, which has a year license system. Morisawa started to sell “Passport,” which also has a year license system. The appearance of outline font was a landmark and those typefaces, which were monopolized by the phototypesetter manufactures, became available to the public. According to Michio Miyazaki, this movement changed the printing industry from a closed environment to an open one.

4.2. The development of device technology

The display resolution of “1024×768” had 50 or more than 50 percent share and the resolution of “1280×1024” had about 25 percent share of the market as of June, 2006. To take the case of Web site, the size of the main display had to be made to “600×800” until 2004, whereas the pop-up size was “600×600” at this time. The increase of resolution has the same effect as the increase of the screen size because detailed information can be seen clearly without changing the size of an actual monitor.

5. Production notes

It can be said that Japanese kinetic typography is now on the start line because technological problems are being solved, such as improving the legibility on displays and solving device-related problems. Some problems caused by the Japanese language characteristics can be solved by technology. However, some cannot be solved even with technology. Thus, I would like to summarize the points that need to be paid attention when making Japanese kinetic typography.

5.1. Co-existence of vertical typesetting and horizontal typesetting

In Japan, vertical typesetting and horizontal typesetting coexist. In vertical typesetting, people write from right to left while people write from left to right in horizontal typesetting. It is not like they can just put letters or characters from right to left. Right to left and left to right horizontal typesetting also coexist, but the reason of coexistence of vertical typesetting and horizontal typesetting is not clear. Therefore, letters or characters are not written from different directions at the same time. If that happens, there will be some confusion because people do not know whether they should read vertically or horizontally.

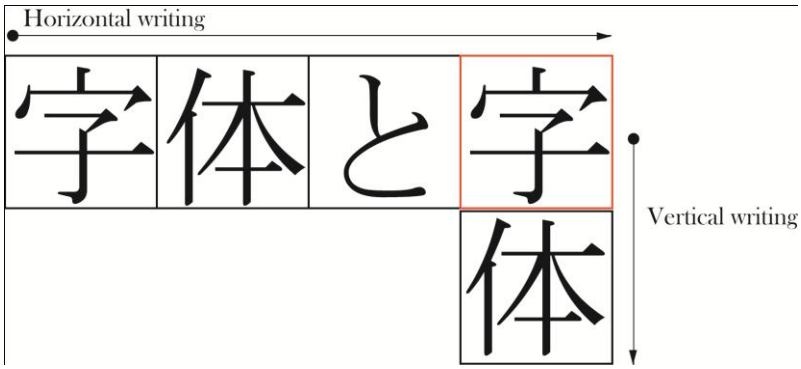

Figure 10. Sometimes vertical typesetting and horizontal typesetting are using for the same page in Japanese.

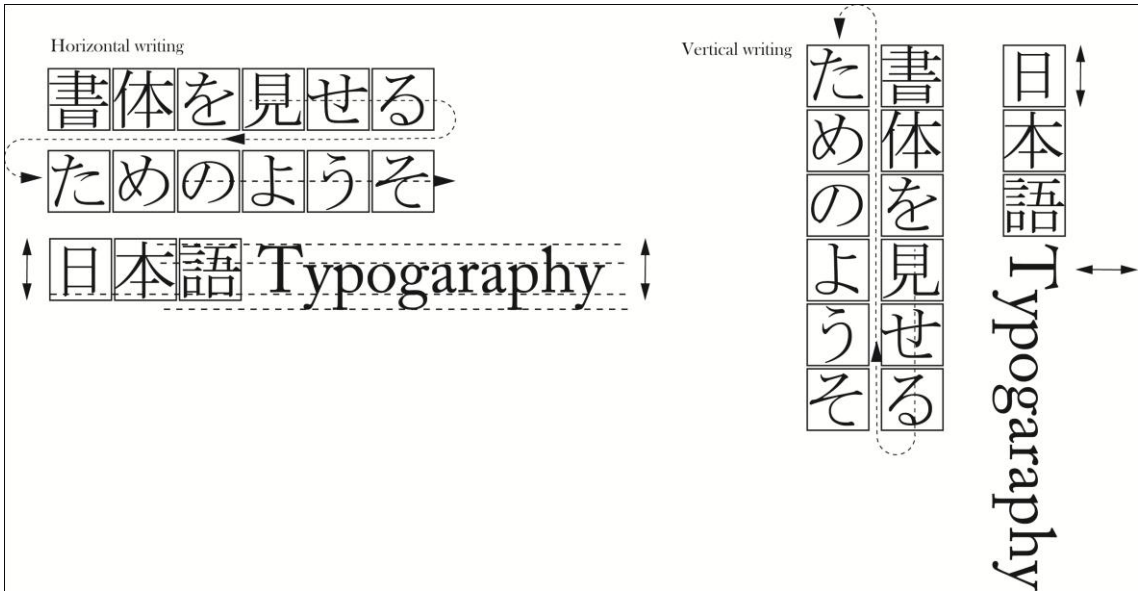

Figure 11. Vertical writing (right) and horizontal writing(left). In Vertical writing, the direction of the top and the bottom of Japanese and English is different.

5.2. Reading twice

When people read Japanese, which is a language where four different kinds of scripts, *Kanji*, *Hiragana*, *Katakana*, and the Roman alphabet, coexist, many people read twice. They first focus on the *Kanji*; and they try to understand the content on the second time. People need to look at the letters and the characters on the display for a while because Japanese sentences have negation or something else in the end, which does not happen in English.

5.3. Dual reading

Split of the character and overlap of the character often appear as an expression of Japanese concrete poetry and typography. Such expression makes double implications on one screen. This needs to be paid attention because the meaning can be different from what was intended when letters are overlapped. However, there is a possibility that the written work will be considered Japanese and wonderful by using the Japanese language characteristics. This is reflected in "dual reading" in haiku, where a sentence or a word can describe two meanings at the same time.

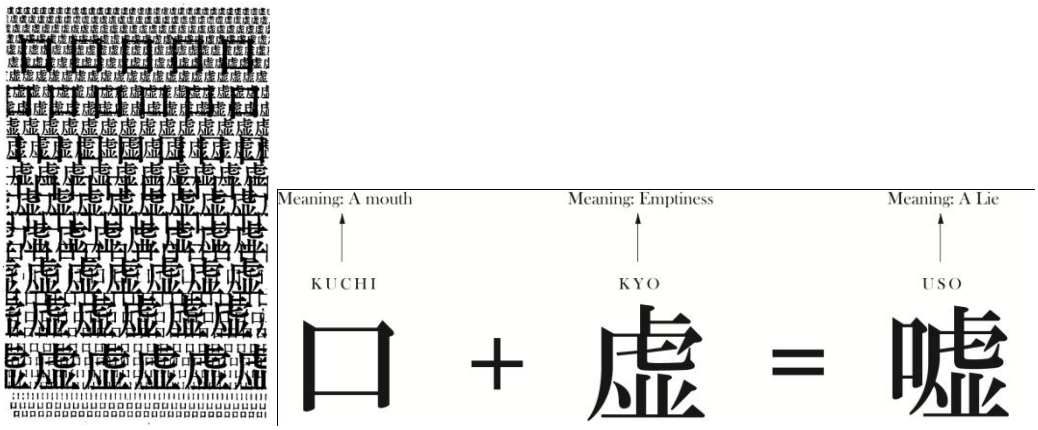

Figure 12. Seiichi Niikuni's Visual Poem

6. Conclusion

In In this article, I focused on the Japanese language characteristics and researched on the reasons why Japanese kinetic typography was so behind the times compared to the one in western countries. It was found that there are problems that have to be solved. Some of the problems are the following: the Japanese language has a large number of letters and characters; many different kinds of scripts coexist; there are various ways to read and write *kanji*. Moreover because of the number of strokes in *kanji* and *dakuten* and *handakuten* in kana are hard to be identified when the letter is small, the development of Japanese kinetic typography was late.

Although some of these problems were solved thanks to the technological development, some are not yet settled. Furthermore, I summarized points to make note when making Japanese kinetic typography.

Compared to Western kinetic typography, Japanese kinetic typography does not have a lot of dynamism and changes and its history is short. However, the viability of Kinetic typography was confirmed from the survey of liability rating, which was conducted in university students in 2010. Moreover, Japan has Japanese calligraphy that started in the Edo period, visual poetry that started in the 1950s, and a history of beautiful typography that indicates the great potential in Japanese kinetic typography.

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