Eye Movement Analysis for Expert and Non-expert in Japanese Traditional Culture of Tea Ceremony - From the View Point of Japanese Hospitality, "Omotenashi"

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Abstract. The Japanese traditional culture of tea ceremony is sometime employed as a way to learn the spirit of "Omotenashi" that is a particularly Japanese form of hospitality. Because when conducting a tea ceremony, care and concern toward the attendants (the guests) are considered to be important. In tea ceremony, there are many states of mind that is important when receiving the guests at the ceremony, such as "Seven Rules of Rikyu", "Harmony, Respect, Quietness and Simplicity" or "Treasure Every Meeting, For It will Never Recur". Especially, attitudes that "the host must prepare thoroughly for the guests, stage a pleasant experience" and "the guest enjoys the preparation of the host" are important. In "Omotenashi", the side providing the service and the side receiving the service are equal, and the guest and the host (the one who invites guest) are also equal in tea ceremony. In our research, we study the lines of sight of the their guest to tea ceremonies and analyze the difference between experts and non-experts in order to learn the spirit of "Omotenashi" from tea ceremony. In this report, we focused on the eye movement of the guest. As the experiment method, we attached an eye movement measurement device to each guest (the side receiving the hospitality), and measured from the moment of tea preparation to just before the moment the guests drank their tea.

Keywords: The way of tea \cdot Omotenashi \cdot Eye movement \cdot Expert \cdot Non-expert

1 Introduction

Tea ceremony, which is considered to be the representative of Japanese traditional culture, is used as one of methods to learn the spirit of "Omotenashi" that is a particularly Japanese form of hospitality. That is because when conducting a tea ceremony, care and sympathy shown toward one's guest is considered to be the most

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important. In tea ceremony, there are attitudes, such as "Treasure Every Meeting, For It will Never Recur" that are crucial when hosting guests.

Especially, attitudes that "the host must prepare thoroughly for the guests, stage a pleasant experience" and "the guests enjoy the preparation of the host" are important. In "Omotenashi", the side that is providing the service and the side that is receiving the service are equal, and the guest and the host (the one who invites guest) are also equal in tea ceremony.

Moreover, there are many types of utensils (tea things) that are used for tea ceremony. Many of them are specific to tea ceremony, and the ways they are used are also unique.

Originally, tea ceremony (Sado) was called "Chato" or "Cha no Yu". The name "Sado" was adopted in early Edo period, and it is used until today. The ultimate aim of tea ceremony is the sense of harmony between the host and the guest. Therefore, elements such as tea things, chiefly among them the tea bowl, or hanging scroll with Zen wisdom hang in the alcove of tea room are more than just individual artworks. Rather, they are parts that constitute the whole, and the passing time of tea ceremony itself is regarded as a total work of art. The traditional Japanese act of boiling water, prepare tea and serve it, and the style and art based on this act, is considered to be a particularly Japanese "Omotenashi". In tea ceremony, the host that is holding the ceremony invites guests after careful preparation, and the guests are expected to understand the intention of the host, behave appropriately to the situation and show gratitude. In other words, they create pleasant space by the host and the guests becoming one. This "reciprocity of the host and the guests" is also called "unity of the hosts and the guests".

In our series of research, we study the lines of sight of the guests invited to tea ceremonies and those of their hosts and analyze the difference between experts and non-experts in order to learn the spirit of "Omotenashi" from tea ceremony. In this report, we focused on the eye movement of guests. In this report, we focused on the lines of sight of the guests in order to measure the difference between expert and non-expert when they are on the side that is receiving "Omotenashi", i.e. the side of the guests. As the experiment method, we attached an eye movement measurement device to each guest, and measured from the moment of tea preparation to just before the moment the guests drank their tea.

The reason why we focused on the eye movement is because the line of sight is considered to be more important than action in people. As acknowledged in proverb "The eyes are as eloquent as the mouth", eye movement is said to makes various impressions on others as one of non-verbal communication. In tea ceremony, the guests and the host are always in equal position, and on the whole, ceremony is conducted in silence. Therefore, line of sight is considered to be established as one of non-verbal communication. By analyzing these lines of sight, we will be able to understand the difference in Omotenashi of an expert and a non-expert, and we will be able to enjoy Omotenashi, based on the spirit of tea that aims to "Treasure Every Meeting, For It will Never Recur".

2 Research

2.1 Purpose

Research the eye movements of the expert and the non-expert who are acting as guests in a tea ceremony, and clarify their difference.

2.2 Method

2.2.1 Production of video footage to be analyzed.

The expert who is in the video is a male expert who is an instructor of tea ceremony. The other participant in the video is a beginner in tea ceremony. The expert participant in the video has 30 years experience in instruction of tea ceremony. He was evaluated as to have sufficient skill to be the expert participant in this video. Figure 2 shows the layout during the filming. A still image from the video is shown in Fig. 3.

The procedure for the research is Furo Usucha Tatemae (Furo Usucha Technique of tea preparation) from Ura Senke, which is the leading school of Japanese tea ceremony. It starts from picking up a tea ladle, taking tea from tea caddy and putting tea in tea bowl, and ends at making tea with tea whisk and serving it to the guest. (Table 1).

Table 1. Procedure of Preparing Tea in Furo Usucha Technique (Excerpt)

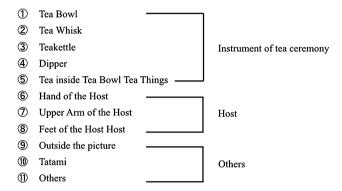
Con	tent of Action
1	Action of picking up a tea ladle with right hand.
2	Action of picking up a tea caddy with left hand, opening its lid with right hand while holding the tea ladle in the same hand, and putting the lid in front of right knee.
3	Action of changing the way one holds the tea ladle, scooping tea from the tea caddy and putting it in a tea bowl.
4	Action of closing the tea caddy and putting back the tea caddy and the tea ladle in their original position.
5	Action of scooping hot water from a teakettle with a dipper, pouring the right amount of hot water into the tea bowl, pouring back surplus hot water into the teakettle and gently place back the dipper on the teakettle (Kiribisyaku)
6	Action of picking up the tea bowl, preparing tea with a tea whisk and putting the whisk back to the original position.
7	Action of turning the tea bowl so that the correct side is facing the guest, and placing it with right hand to Joza (fixed position).
8	Action of receiving the greeting from the guest.

Based on the procedure shown in Table 1, it was classified into 6 steps in order to analyze eye movement analysis. 1 is the act of taking hot water from a teakettle. 2 is the act of pouring hot water into a tea bowl. 3 is the act of making tea with a tea whisk. 4 is the act of holding a tea bowl. 5 is the act of the guest holding the tea bowl. And 6 is the act of the guest drinking tea. (Table 2). This procedure was conducted by both the expert and the non-expert. When the host part was performed by the expert, the non-expert performed the part of guest and her eye movement was analyzed. In turn, when the host

Table 2.	Process	in	Eve	Movement	Analysis
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Content of Action				
1	Action of taking hot water from teakettle.			
2	Action of pouring hot water into a tea bowl.			
3	Action of making tea with a tea whisk.			
4	Action of holding a tea bowl.			
5	Action of the guest holding the tea bowl.			
6	Action of the guest drinking tea.			

Table 3. Classification of focal points of the guest part



part was performed by the non-expert, the expert performed the part of guest and his eye movement was analyzed. Furthermore, area classification was conducted in order to identify the focal points of the eyes for the study of the eye movement, as shown in Table 3 (Figs. 1 and 4).

2.2.2 Research Procedure

Both the expert and the non-expert performed the role of the guest for 6 times and each time the eye movement of the guest part was measured. The eye movements of the test subjects were recorded on the video filmed by the eye movement measuring device. This video was played frame by frame, and the focal point of the guest in each frame was studied. (Table 3) After this focal point study was conducted from the beginning to the end of the video, a focal points graph data where the horizontal axis is time and the vertical axis is focal point were produced. With these graphs, the difference in the eye movements between the expert playing guest and the non-expert playing guest was researched.

2.3 Result

Table 4 is the eye movement of the expert playing the guest part. The expert did not only focus on the preparation of tea, i.e. the phenomenon in front of him, but also paid

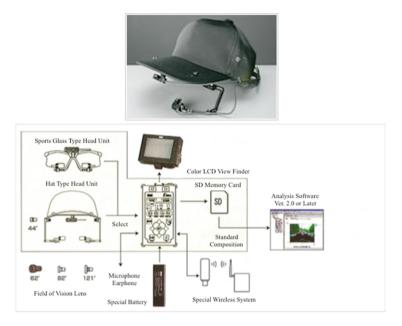
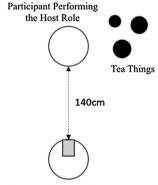


Fig. 1. Eye Movement Measuring Device



Participant Performing the Guest Role with Eye Movement Measuring Device Attached

Fig. 2. Positions During the Research

attention to the tea things. In tea ceremony, the selection of the things is an important component of "Omotenashi". Therefore, it can be said that the expert feels the whole room in total as the space, and its atmosphere, while receiving hospitality, and he became one with the person preparing tea.

Table 5 is the eye movement of the non-expert playing the guest part. The non-expert focused only on the moving parts of the person preparing tea. This can be considered that she was merely following the gestures and hands movement of the person preparing tea.



Fig. 3. Still from Study Video of Expert (1)



Fig. 4. Still from Study Video of Non-expert (2)

Next, we will discuss the step (1) and (2) as the comparison of each step. One of the etiquettes of tea ceremony is called "Sekiiri". In this, the convention is for the guest to look at and appreciate the decoration in alcove or the tea things in front of him/her. The lines of sight of the expert show that he was following this etiquette and paid attention to the teakettle or the tea things around the kettle. On the other hand, the focal point of the non-expert was recorded to be on the tatami floor at first. This suggests that she was more concerned about the rule that "One should not step on the edge of tatami" than the etiquette. The reason why you cannot step on the edge of tatami is that because the edge is considered to be the "face" of tatami in Japan. Each sheet of tatami has a pattern with vertical stripes called "Tatamime". Each of this Tatamime is about 1.5 cm, and in tea ceremony, the position of tea things is determined in relation to this Tatamime. Moreover, some tatamis have the family crest of the host on its edge. Therefore, as the crest represents the house of the host, stepping on it is considered to severely disrespect the ancestors of the host.

Following will discuss the step (3) and (4). In these steps, the expert elegantly observed the flow of procedures, and at the same time paid attention to the tea things being used. However, the non-expert paid attention to each procedure for too long, and it appears that she was trying to learn the correct movement, in other words the efficient and beautiful movement of the hands of the host.

Tatami Outside Picture Wall

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3

Tea Bowl
Tea Whisk
Teakettle
Dipper
Tea Inside Tea Bowl
Hand of the Host
Upper Arm of the Host
Feet of the Host

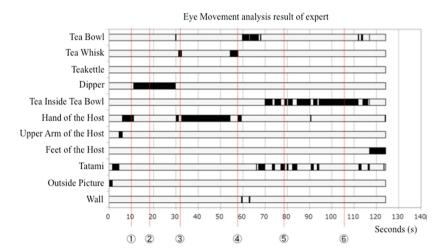
Table 4. Eye Movement Data When the Expert Was Performing the Guest

Table 5. Eye Movement Data When the Non-Expert Was Performing the Guest

4

(5) (6)

120 130 14 Seconds (s)



Lastly, steps (5) and (6) will be discussed. Before drinking the tea offered by the host, the expert naturally focused in order of, on inside the tea bowl (tea) \rightarrow tatami \rightarrow tea bowl \rightarrow hand, for two rounds. The non-expert also naturally focused in order of, on inside the tea bowl (tea) \rightarrow tatami \rightarrow inside tea bowl (tea) \rightarrow hand, and repeated it. Both the time it took in mixing tea with tea whisk and the time it took to pass on the prepared tea inside the tea bowl over tatami were longer then expert.

3 Discussion

When the expert was performing the role of guest, he focused not only on the movement of the host, but also on the tea things such as teakettle or tea whisk. The non-expert however focused only on the movement of the host. This led us to conclude that for the expert, tea things would also be important factors in enjoying a tea ceremony. On the other hand, the non-expert appeared to enjoy only the movement of the host. As the result of this research, the important element in enjoying a tea ceremony for the expert is not to focus only on the movement of the host, but also to appreciate the tea things, tea bowl or tea-set being used in the ceremony.

In tea ceremony, one can enjoy all the "five senses", namely sight, hearing, smell, touch and taste, in a tranquil space.

Utensils, hanging scroll or the tea things please the "sight", the sound of cracking charcoal, tea whisk cleansing or whisking tea please the "hearing", the smell of incense, charcoal and tea please the "smell", the surface of the tea bowl pleases the "touch", and the tea and sweets please the "taste".

In Japanese "Omotenashi", one can receive deeper hospitality by the guest and the host being in the equal position and sharing knowledge and education.

In future, we will research "Omotenashi" in tea ceremony, which is Japanese traditional culture, even deeper by measuring the lines of sight on the side of the host.

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