

# A Study on the Odor in “Omotenashi”, Japanese Hospitality

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**Abstract.** In Japan, there are many songs and stories about fragrances in classical literature. In addition to burning incense in Buddhism rituals, Japanese created a unique world so called “Kodo.” This also shows that the Japanese have been in history with scents. Regarding the aroma of hospitality, it is necessary to consider the preference of the scent when greeting people. In order to know the preference to the scent of hospitality and Japanese traditional culture, we conducted the questionnaire survey to Japanese males and females using different fragrances of different types and examined the results.

**Keywords:** Odor · Perfume · Japanese hospitality · Japanese tradition

## 1 Introduction

The history of fragrance is as old as time. There are a vast number of scents in the world. It is often said that humans can feel and differentiate between about 40,000 kinds of scents [1]. The variety of reactions that scents can bring to living things are immeasurable. Also, scents can sometimes be harmful. However, it is essential for human beings to have their own signature fragrance. A vast amount of scientific information is naturally coded into many perfumes [2]. The etymology of “perfume” stems from Latin “per-” and “fumum.”

People feel happy when they experience a pleasant scent. On the other hand, people feel uncomfortable when they sniff an unpleasant stench. We Japanese value our own unique sense of hospitality: “Omotenashi,” very much. And we often enjoy using a variety of scents in our daily lives. We enjoy scents by ourselves and our family. Sometimes we use fragrances as part of our unique sense of hospitality.

We make original perfumes based off of other people’s preferences, and depending on the season, and depending on the unique atmosphere of our house, we make our selection and transfuse fragrances into a piece of test paper in order to produce the scent. In addition, we burn incense, sprinkle room fragrance, and even use aroma diffusers, aroma pots, and aroma oil etc.

By creating a custom scent, we create a specifically relaxed atmosphere, glamor and personality. We always gauge our guests’ reaction at that time, and we try to make a mental note for the next time we will create a unique scent.

In Japan, there are many songs and stories about fragrances in classical literature. In addition to the incense burned in the Buddhist ceremony, we Japanese also have created a unique imaginary world called “Koudo.” That allows us to enjoy fragrances in their original form. The fragrance creates a special atmosphere and takes people to a comfortable and dreamy world [3]. This also shows that the Japanese have been with experimenting with fragrances for a long, long time. At every stage of life, each scent represents our state of mind. The heart of our hospitality and fragrances are deeply connected.

In hospitality-inspired scents, while entertaining people, it is necessary to consider the preference of the scent to the nose of the beholder. In order to properly identify their taste, we used different types of perfume and conducted a questionnaire survey on Japanese men and women. Afterwards, we analyzed the results and verified the tendency towards people’s hospitality and Japanese aroma.

## 2 Method

### 2.1 Incense Tones Used in the Experiment

A note is a word used to express the category to which a scent may belong. Each note has its own style, but because the classification of incense tone has its own categorization for perfume companies and organizations, it is not necessarily scientifically correct. First of all, we will introduce 11 representative notes as shown below. Each of notes appears frequently in every perfume recipe. By grasping the characteristics of the scent, it becomes possible to catch the image of the perfume more specifically [4]. This time, we used five kinds of fragrance, ‘green’ notes, ‘citrus’ notes, ‘floral’ notes, ‘woody’ notes, and ‘chypre’ notes. Attached is a list of commonly used notes.

- |                    |  |
|--------------------|--|
| 1. Green note:     | fresh, clean, natural, gentle, intellectual  |
| 2. Citrus notes:   | fresh, cool feeling, refreshing, cheerful, youthful                                    |
| 3. Floral notes:   | elegant, romantic, soft, gorgeous  |
| 4. Fruity note:    | cute, juicy, cheerful, youthful  |
| 5. Woody note:     | serene, delicate, mysterious, quiet, calm  |
| 6. Chypre note:    | sophisticated, elegant, chic, grown up   |
| 7. Fougere note:   | dandyish, typical scent for men, elegant, deep   |
| 8. Marine note:    | fresh, light, reminiscent of the ocean, sky and the universe, transparent, open-minded |
| 9. Gourmand note:  | pretty, unique, youthful, sweet  |
| 10. Spicy note:    | originality, powerful, impact, warm  |
| 11. Oriental note: | smooth, sexy, passionate   |

### 2.2 Scents Used for a Questionnaire Survey

In this experiment, we used five different notes (A to E) below and conducted a questionnaire survey.

- (A) SAMSARA Guerlain 1989 (Woody Note) Eau De Toilette  
Samsara is a Sanskrit word, meaning ‘a never-ending cycle of life and death;’ that is, a journey to the state of Nirvana. The secret ingredient of Samsara is the usage of Jean Paul’s ‘Sandalwood.’ Since sandalwood overpowers our olfactory organs, it is notorious as a fragrance that is hard to handle. It disappears almost immediately after sniffing. Although it may seem contradictory, there is a tenacious strength and scent retention, so it keeps down the fragrance used together. The composition opens with a spread of bergamot which is typical of Guerlain, and abundant jasmine of middle note spreads with accents of rose, narcissus, and ylang ylang. The fragrance moves on to a strong finish with sandalwood, vanilla, coumarin [5].
- (B) DIORISSIMO Dior 1956 (Floral notes) Eau De Toilette  
Diorissimo smells extremely refreshing. With a freshness reminiscent of fresh greens, it gives the patient the sense that the fragrance came directly from the ground. The fragrance lingers for a long while, reminding the beholder of the flowering of delicate flowers. Then, just as that same splendid fragrance that melts your heart appeared, it disappears like waking from a dream. Roudnitska blended lilac, jasmine, and rose to express this scent, and made faint a deep forest with civet and sandalwood. Diorissimo is a magical perfume [6].
- (C) No. 19 Chanel 1970 (Green note) Eau De Toilette  
No. 19 uses sandalwood and oak moss accents, but weakens the usual sweetness of ‘Lily of the Valley,’ ‘Rose de Mai’ and ‘Jasmine of the Middle’ in a slight leather and musk. In addition hyacinth exudes freshness [7].
- (D) MITSUKO Guerlain 1919 (Chypre note) Eau De Toilette  
‘Mitsuko’ begins with the crystal clear aroma of bergamot, and a harmonious mix of synthetic peach, rose, and a jasmine spread. The Fragrance settles on notes of oakmoss, vetiver, cedar wood, black pepper, cinnamon, and ambergris. There are many other famous perfumes inspired by Mitsuko. Mitsuko is a common Japanese woman’s name; specifically, it is a heroine of Farrell’s “La Bataille.” Mitsuko was the wife of Japanese navy general but was also in love with a young British naval officer. Since Mitsuko couldn’t express her feeling to him, it was kept secret in the heart [8].
- (E) CARON PARIS (Citrus note) Eau De Toilette  
Caron was introduced in 1904 by Ernesto Daltro, at a perfume shop in Paris. It is a Maison Fragrance brand that always draws from the traditional fragrances and maintains its position as an innovative producer in the field. We have proposed a unique and fragile fragrance that cannot be imitated by outsiders using only the highest quality essences. This signature fragrance will frequently remind the beholder of dreams or something unforgettable. Caron understands the perfume as a work of art deeply and continues to fascinate women [9]. It is a citric fragrance and because it is a unisex fragrance, it is characterized by a light gentle fragrance that can be used by both men and women.

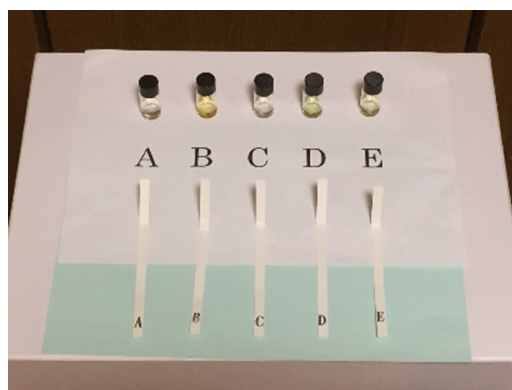
### 2.3 Participants of a Questionnaire Survey

A total of 59 participants took part in the questionnaire survey (23 males and 36 females). The average age of males and females are 45.4 and 32.2, respectively.

### 2.4 Method of a Questionnaire Survey

We distributed a set of 6 sheets of questionnaires with a pencil and eraser to the participants. The first piece of the questionnaire is a description formula for the purpose of investigating participant’s awareness of scent (Appendix A). The second to sixth questionnaires are for evaluating the impression of five types of scents A, B, C, D, and E. For that reason, we selected 22 different sensuously stimulating words for the fragrance images used in evaluating five kinds of scents A to E. I also prepared two questions asking whether participants felt nostalgic about Japanese hospitality or Japanese tradition from the scents. Regarding each scent, participants gave scores between +3 and -3 points for each sentiment word and were evaluated. Finally, with free description, we asked participants the impression of scent (Appendix B).

We installed five types of scented bottles on the mount written as A, B, C, D, and E as shown in Fig. 1.



**Fig. 1.** Experimental setup

We asked one of the participants to decide the order in which to distribute the 5 scents; afterwards, half of the participants evaluated the scents in that order and the other half did in the opposite order.

As soon as prep was completed, the participants started questionnaires. We took the participants and administered the first scent around the end of the first description questionnaire. The fragrance was attached to the tip of the test paper. Participants brought the fragrance-attached parts of the test paper close to their noses and sniffed the fragrance slowly. After the smelling portion had finished, we ask the participants to answer the questionnaire.

As for the way of testing scents, we demonstrated how to smell using the test paper as shown in Fig. 2. When the participants finished describing the evaluation questionnaire of their impression of one scent, we administered the next scent.



**Fig. 2.** Method of testing a scent

Since the questionnaire consists of one question for one scent, we asked participants to answer singularly and specifically on the impression of the fragrance in and of itself, not comparing. Finally, we collected all the test papers, questionnaires and fragrances.

Figure 3 shows the experimental scene.



**Fig. 3.** Experiments being performed

## 2.5 Data Analysis Method

In this paper, we focus on the questionnaire items of No. 23: “Do you feel as if these scents are traditionally Japanese?”, and No. 24: “Do you feel as if these scents are

reminiscent of Japanese hospitality fragrances?” We investigated the impressions of Japanese tradition and hospitality that were felt per each scent that was smelled. We also examined whether those impressions were different for males and females.

### 3 Results of a Questionnaire Survey

#### 3.1 Correlation Between Feelings of Japanese Tradition and Hospitality

We show the three-dimensional histogram of Japanese traditional and hospitality evaluation values in Fig. 4. We calculated Pearson’s product-to-moment correlation using the results of Japanese tradition and hospitality by using R system. As a result, we obtained a correlation coefficient of 0.57 with  $p < 0.01$ . From the feedback, we discovered a moderate correlation between the sense of Japanese tradition and the hospitality assessment of the scents.

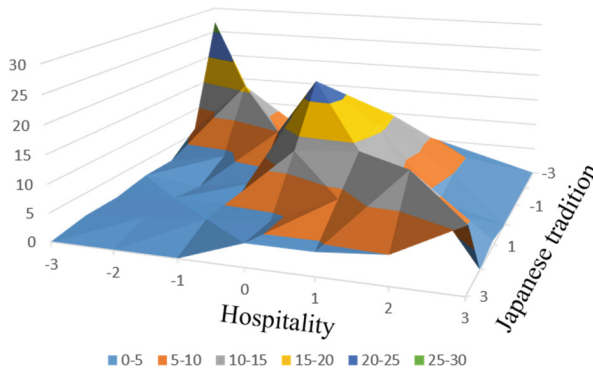


Fig. 4. Three-dimensional histogram of Japanese traditional and hospitality evaluation values

#### 3.2 Result of Hospitality Feeling

We examined the results of the hospitality nostalgia survey against the 5 scents, and whether there is a difference in the evaluation scores between the scents. First, we performed a Bartlett test to investigate the size of the variance between each level of the scent factors, and we discovered that the variances correlated statistically ( $p > 0.05$ ). Next, by a one-way analysis of the variances, we tested whether there was any significant difference in the average value of each level of scent factor. As a result, a statistically significant difference was recognized ( $p < 0.05$ ). Finally, multiple comparisons were carried out by the Bonferroni method. There was a significant difference only between D and B as shown Fig. 5 ( $p < 0.05$ ). We conducted a two-way analysis of variances by scent factors and gender factors. As a result, it was recognized that there was a statistically significant difference in both the scent factor and gender factor ( $p < 0.05$ ). There was no interaction between scent factor and gender factor ( $p > 0.05$ ).

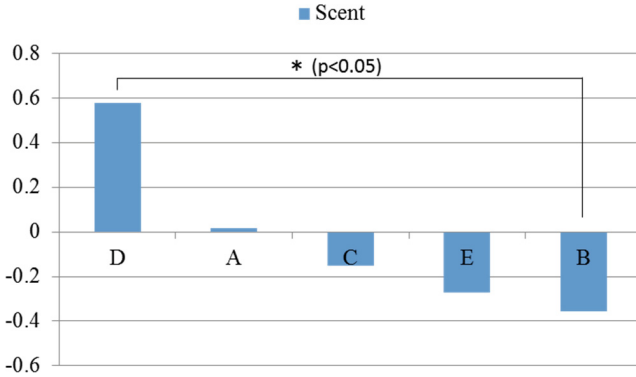


Fig. 5. Result of hospitality feeling

In order to observe the difference in gender factor, we compared the results of the male group and female group as shown in Figs. 6 and 7, respectively. We performed a one-way analysis of the variances in order to test whether there was a significant

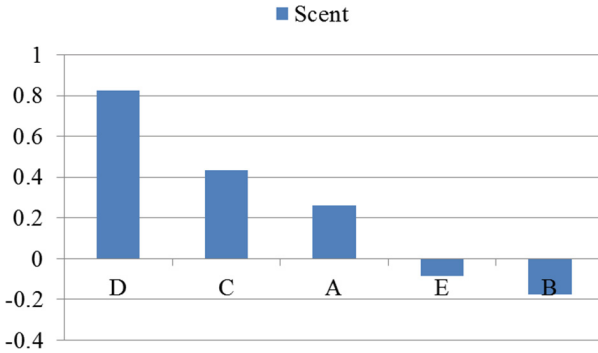


Fig. 6. Result of hospitality feeling of male group

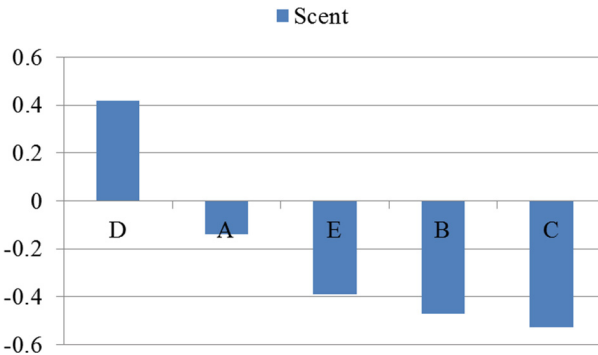


Fig. 7. Result of hospitality feeling of female group

difference in the average value of each level of scent factor. As a result, no statistically significant difference was recognized in either group ( $p > 0.05$ ).

**Result of Japanese Traditional Feeling**

We examined the evaluation results of Japanese traditional feelings per the 5 scents, and gauge whether there is a difference in the evaluation scores between the scents. Firstly, we performed Bartlett test to investigate the equality of the variance between each level of the scent factor, and showed that each level of the scent factor had the equality of the variance statistically ( $p > 0.05$ ). Next, by one-way analysis of variance, we tested whether there was a significant difference in the average value of each level of scent factor. As a result, a statistically significant difference was recognized ( $p < 0.01$ ). Finally, multiple comparisons were carried out per the Bonferroni method ( $p < 0.01$ ). There was a significant difference only between D and other scents as shown Fig. 8. We conducted a two-way analysis of variance by scent factor and gender factor. As a result, it was recognized that there was a statistically significant difference in the scent factor ( $p < 0.01$ ), but no significant difference in gender factor ( $p > 0.05$ ). There was no interaction between scent factor and gender factor ( $p > 0.05$ ).

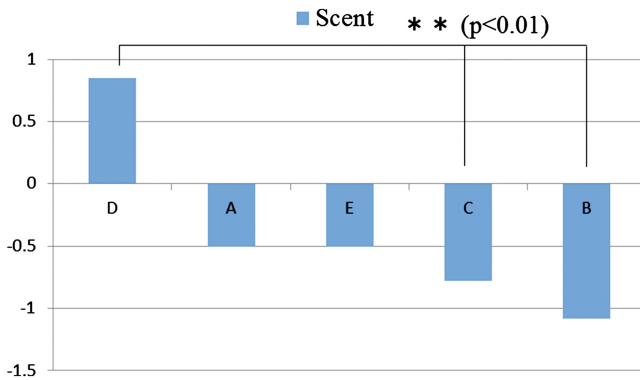


Fig. 8. Result of Japanese tradition feeling

**4 Discussion**

A correlation was found in the evaluation of the feedback regarding hospitality and Japanese tradition feelings. The reason for this is presumed to be that Japanese people have a nostalgic feeling of hospitality, ingrained as a part Japanese tradition. In addition, D: MITSUKO has gained high scores in both hospitality and Japanese tradition feelings. As for Japanese tradition feeling, the score of B: DIORISSIMO was low for both male and female groups. There was no significant difference in hospitality feeling, but it is interesting that the score of C: No. 19 was different for both males and females; males’ average score of C was higher than females’ average score of C.



No. 19 was reviewed favorably by both men and women because of the refreshing fragrance of Galvanum (parsley family of plants), but notably men prefer the Galvanum scent most of all. Galvanum is sometimes made as an image of that green tea. Green tea is preferred all over the world. There are also many perfumes using the smell of green tea. It can be said that No. 19 has the fragrance of the image of green tea that the Japanese prefers to drink. By thinking about green tea, it seems that men felt a stronger sense of hospitality than the females. There is also a masculine note in the green fragrance, which is also considered to be a reason why the men chose No. 19 as hospitable scent.

In this questionnaire survey, we chose scents which used such as sandalwood and cedar wood (Pinaceae/Japanese cypress) in consideration of the scent of Japan and the scent of hospitality. Sandalwood is said to be of high quality, especially incense from Mysore, India, which is most frequently used as a material indispensable for incense and odor even at present.

According to the result of the questionnaire survey of this time, the reason why D got a positive impression as a scent that makes one feel a sense of hospitality and Japanese tradition is because a woody scent was felt; which is a characteristic often associated with Japanese tradition and hospitality. And such a scent is featured in Chypre note. In other words, any fragrance that gives off the impression of Japanese tradition and hospitality is deeply connected.

Japanese people seem to be seen amongst images of tree and forest scents. For Europeans who live in houses made of stone, it might be immensely charming to live in houses made of wood. The scent of the Hinoki (Japanese cypress) bath calms down for the Japanese people. The history of the Japanese use of fragrance began with the arrival of Buddhism in 538 A.D. "Kunkou," which burned fragrant wood, resin or balsam and so on would have been the beginning. Of course, in Japan as in other countries, the incense of the religious ceremony was indispensable as an important instrument that creates a mysterious atmosphere [10]. Knowing this, it can be understood that the existence of tree scents are inherent in the Japanese tradition.

## 5 Conclusion

A questionnaire survey was conducted on 60 male and female scents perceived and their effect on the recalling of nostalgia, specifically Japanese tradition and hospitality. D: Mitsuko got a significantly higher score for Japanese tradition and hospitality feelings out of five scents as to be tested. D: Mitsuko is a Chypre note, a smell of wood, a smell of forest. It is suggested that Japanese tradition and hospitality are deeply linked to the scent of wood and the scent of forest for Japanese.



## Appendix B

(Questionnaire 1)		★for scents of A~E							
1	Like	+3	2	1	0	1	2	-3	Dislike
2	Pleasant	+3	2	1	0	1	2	-3	Unpleasant
3	Comfortable	+3	2	1	0	1	2	-3	Uncomfortable
4	Strong	+3	2	1	0	1	2	-3	Weak
5	Light	+3	2	1	0	1	2	-3	Heavy
6	Masculine	+3	2	1	0	1	2	-3	Feminine
7	Powdery	+3	2	1	0	1	2	-3	Oily
8	Sweet	+3	2	1	0	1	2	-3	Bitter
9	Clear	+3	2	1	0	1	2	-3	Fuzzy
10	Dry	+3	2	1	0	1	2	-3	Moist
11	Refreshing	+3	2	1	0	1	2	-3	Annoying
12	Gentle	+3	2	1	0	1	2	-3	Sharp
13	Clean	+3	2	1	0	1	2	-3	Messy
14	Elegant	+3	2	1	0	1	2	-3	Wild
15	Graceful	+3	2	1	0	1	2	-3	Cheap
16	Adult-like	+3	2	1	0	1	2	-3	Childish
17	Mature	+3	2	1	0	1	2	-3	Immature
18	Young	+3	2	1	0	1	2	-3	Old
19	Calm	+3	2	1	0	1	2	-3	Violent
20	Sensual	+3	2	1	0	1	2	-3	Neat
21	Oriental	+3	2	1	0	1	2	-3	Western
22	Positive	+3	2	1	0	1	2	-3	Negative
23	Japanese tradition feeling	+3	2	1	0	1	2	-3	No Japanese tradition feeling
24	Hospitality feeling	+3	2	1	0	1	2	-3	No Hospitality feeling
25	What do you feel this scent?	(							)

Thank you for your cooperation. Perfumer • Harumi Nakagawa

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