

The Japanese partiality towards boundaries

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Introduction

Urban space is an entangled fabric in which intricate human beings live. Regarding intricate worldviews of humans, Mircea Eliade argues, from a viewpoint of anthropology, that they have concepts of boundary which gives them senses of divergence between their worlds and other worlds with his aphorism, “For religious man, space is not homogeneous” in his book, ‘The Sacred and the Profane’ (Eliade, 1959). The sense of boundary was visible in ancient far-east cities, such as Cho-an, Nara and Kyoto, which were set up under the influence of Chinese dynastic culture. They had perfect grid systems (see Fig.1, which is the original plan of ancient Kyoto). In ‘The City Shape’ (Kostof, 1991), Kostof points out that the urban grid system has served the symbolic needs of the most absolute government as well as requirements of defence, agricultural development and trade. The political centre in absolute government gave its people a concept of inner and outer city. Eventually, the concept produced many boundaries, those between human and monsters, human and nature, daily life and non-daily life. Such antonyms had been produced in their senses.

The urban grid of Kyoto has not remained as the original structure (Fig.1) and has been deformed in the long-term process of generation. Besides physical change in the structure, it is reasonable to suppose that the worldview of people has deteriorated.

Machi-ya is a type of urban house located in central Kyoto. Shimamura et al propose that this house type has been shaped under the influence of the urban grid (Shimamura, Suzuka et al, 1971). Over and above that, Yasuo Takahashi develops that there are more complicated backgrounds and summarised their characteristics in four words: Touri [street], Omote [Face], Ura [Back] and Oku [Depth] in his book, ‘Kyo Machi-ya: Sennen no Ayumi’ (Takahashi, 2001). By means of not only the physical reasons but also four cultural concepts, he demonstrates that there are visible and invisible boundaries in the house type.

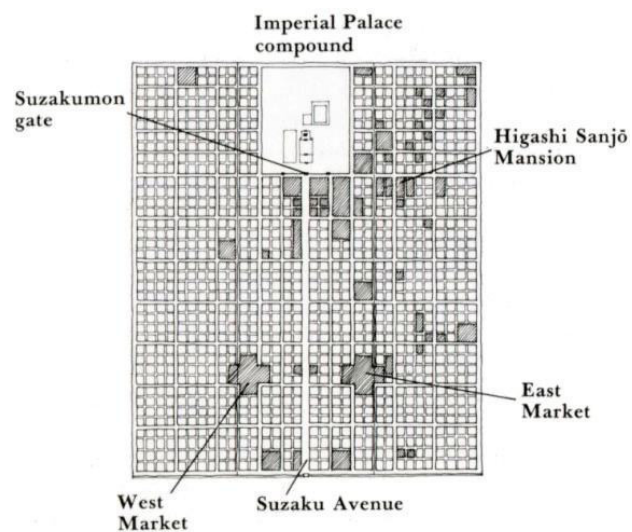


Figure.1: The map of ancient Kyoto (Source: p.57, What is Japanese architecture?, 1996, Nishi, K. & Hozumi, K., Tokyo, Kodansha.)

The purpose of this study is to investigate how the sense of boundary in Japanese houses and worldviews have been generated in Japanese space.

1. Background of this study

1.1. The game and the ritual

Structuralism by Claud Levi-Strauss is of great value in decoding the unintelligible layers as “Structure” by means of comparing various world cultures. In his work, ‘The Savage Mind’ (Levi-Strauss, 1957), he adapts concepts, the game and the ritual, in order to analyse and decode the invisible structures. The game, in his sense, predetermines things symmetrical as a condition. It is the phenomena of probability. When a coin is thrown, percentages whether it shows obverse side or reverse side are exactly equal. Therefore, the relationship between both sides is symmetrical. However, after throwing, the result recomposes them as winner and loser. Suddenly, it becomes an asymmetrical relationship. In contrast, in a sense of the ritual, they throw a coin until the expected result comes out. The result is predetermined. A partiality against the law of probability could be shown.

Repeated games make a stable condition. If a coin is thrown once only, the percentage of obverse side coming out can be 100% by chance. However, after thousands of throws, the percentage of the obverse side should be almost 50 % and the reverse 50%. In the sense of this paper, this homogenous condition is explained as high entropy. The game makes matters homogeneous and have high entropy. On the other hand, the ritual keeps matters heterogeneous and have low entropy, because they have partiality. However, in another viewpoint, another vector toward entropy can be seen in some condition. In this paper, former entropy is referred to as physical entropy, and the latter as ritual entropy.

1.2. Space Syntax

Space Syntax theories normally present powerful results on describing the configuration layout of space in term of integration. A result of convex analysis of space syntax shows permeability in space, and it should have a tight relationship with physical entropy. In this paper, several types of residence have been analysed as case studies, and the houses basically need economical routes of movement owing to the fact they are places of living, serving tea or entertainment. More frequent functions should be located in more integrated areas, and less frequented rooms designed to be in a less integrated place. If the house satisfies this condition, it is good design and has higher physical entropy.

Residence is not only a mechanical box but also a place human beings live in. The potential layout of configuration as a box gives vector toward physical entropy. On the other hand, architecture could be constructed with other viewpoints excepting those of economy. This would mean that the most important room would be situated in the most segmented place. This

phenomenon could be explained from the viewpoint of the ritual. If a building satisfies the worldview perfectly, it has high entropy.

2. Case Study

2.1. The three houses in Kyoto

As described in the introduction, there are many explanations for generation processes of urban houses in Kyoto. To sum up them, minimally, it is likely that these houses, which still exist, were shaped between the end of the Muromachi era (1338-1573) and the start of the Edo era (1600-1868). This period is in accord with a term of Kyoto's reconstruction. Ancient Kyoto (Fig.1.) was deformed, and the difference in the shape can be seen by comparing the original to axial map of today's Kyoto (Fig.2).

As for the reconstruction of Kyoto, briefly stated, the major characteristics can be summarized in two points. The first point is that the population of Kyoto phenomenally increased following the cessation of several wars and the start of a peaceful period. The second point is that Kyoto experienced its golden age in culture under the potent power of a huge population.

Machi-ya is a typical case of the product by the first point. A number of people came to Kyoto to settle down. Therefore, they contrived to build enough number of houses in limited area. Under a high density condition, Machi-ya was formed as a functional house. A typical product of the second point is Suki-ya. The house is a product of topological cram that the ritual and cultural lifestyle, which had been matured in the natural life, put in the urban space. Ocha-ya has a similar background to Suki-ya. Whereas Suki-ya is a cultural and ceremonial house for the privileged classes, Ocha-ya is a pleasure house for ordinary people.

The original establishment of the perfect grid in Kyoto produced only a concept of Touri [Street]. The street divided the city into blocks. After increasing population and maturing the culture, the block could develop itself. The concepts of Omote [face] and Ura [back] matured in this process. At first, these concepts were just those of public and private. They are two topological paths of public and private, however, the sophistication in these concepts made them more mixed and complicated.

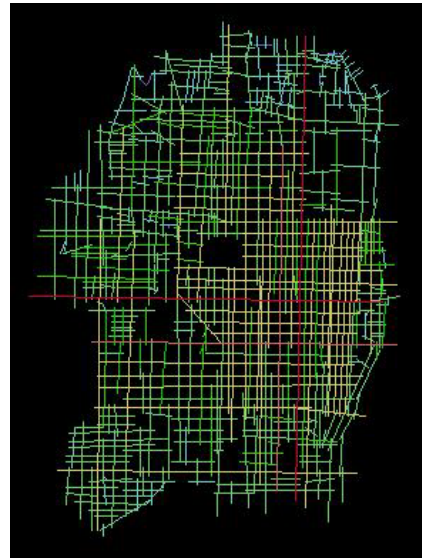


Figure.2: Axial map of contemporary Kyoto
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2.2. Machi-ya

In terms of function, the objective of Machi-ya is to have a daily home life. These houses are normally rented houses. Therefore, they are designed to suit various kinds of tenant. Compared with modern houses, these houses have more flexibility in the function. The living room, for example, works for the family meeting and watching TV in daytime. However, at night it can serve as a sleeping room with a futon [mattresses]. Almost all of the rooms are multi purposed rooms.

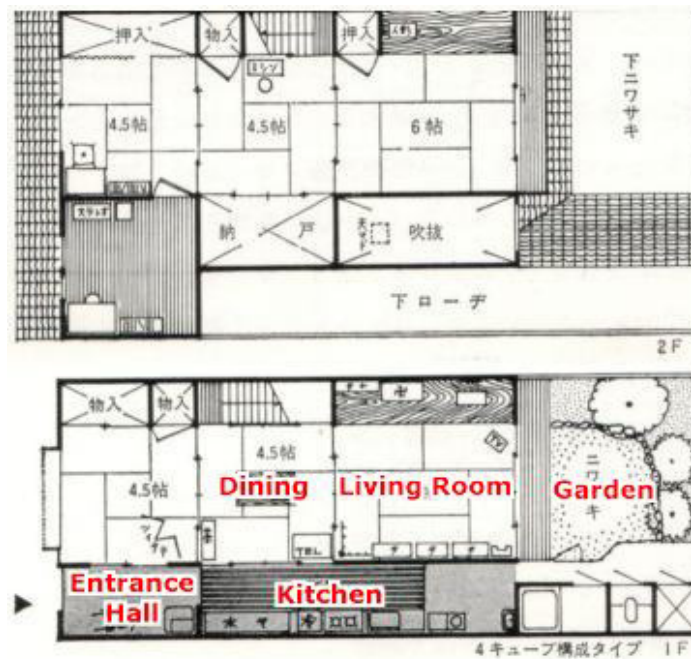


Figure.3: Plan of Machi-ya (Source: p.139, Kyo no Machiya, 1971, Shimamura, N. Suzuka, Y. et al., Tokyo, Kajima.)

Fig.3 represents a typical layout of Machi-ya. In Japanese culture, people remove their shoes when entering houses. However, in Machi-ya, people can go through to the rear garden via the entrance hall and kitchen with shoes on. This is a typical feature of Machi-ya. Guests remove shoes in the entrance hall. And dwellers of this house remove them in the Kitchen. Inevitably, the route of guest and dwellers are diverse. The concepts of Omote [face] and Ura [back] can be seen here.

2.3. Suki-ya

Suki-ya is characterized by the tea ceremony, such as the rules on how to hold one, and purposed space: tearooms and gardens. As for Suki-ya, Tenshin Okakura translates this word as a place of tastefulness and décor in 'The Book of Tea' (Okakura, 1906). The purpose of the house is to hold the tea ceremony and build an ideal space which satisfies a philosophy of the tea ceremony. The doctrine of the tea ceremony is to unify a host and guests, and break a hierarchy among them by holding the tea ceremony together. The ceremony is one of the most influential cultures for Japanese houses because it has established many rules on how people

should behave in tearooms, and the rules have been applied to ordinary Japanese houses.

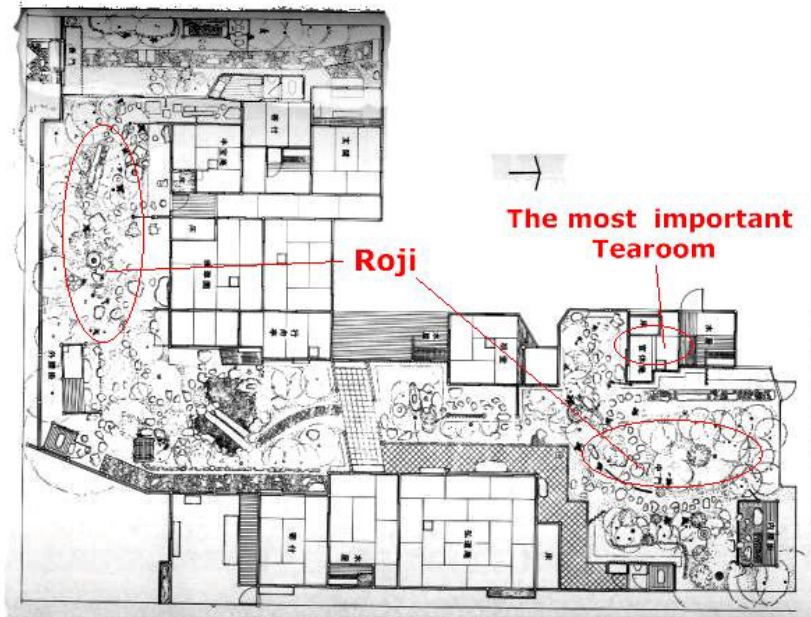


Figure.4: Plan of Mushanokoji-senke (Source: p.184, Cha no Niwa, Nihon no Teien 4, 1995, Nakamura, M., Tokyo, Kodansha.)

The drawing above (Fig.4) is a plan of Mushanokouji-senke. The most important tearoom is situated in the deepest point and is used for formal ceremony. The other tearooms are mainly for practice. The guests at the tea ceremony have to pass through the winding paths in the gardens. These gardens are called “Roji.” Okakura writes, “The Roji was intended to break connection with the outside world, and to produce a fresh sensation conducive to the full enjoyment of aestheticism in the tea-room itself (Okakura, 1906). In Suki-ya, the Roji works for setting up a strong sense of boundary.

2.4.Ocha-ya

Ocha-ya has a similar appearance to Machi-ya. However, the purpose and the spatial configuration differ from those of Machi-ya. The main purpose of the house is to entertain customers with food, drink and dance of Geisya. This house normally does not have a proper kitchen as Machi-ya has. They order food from neighbouring restaurants and the Kitchen space works as a service route for delivery. Additionally, Geisya dancers go up to the floor from the kitchen. This path is similar to that of Machi-ya dwellers.

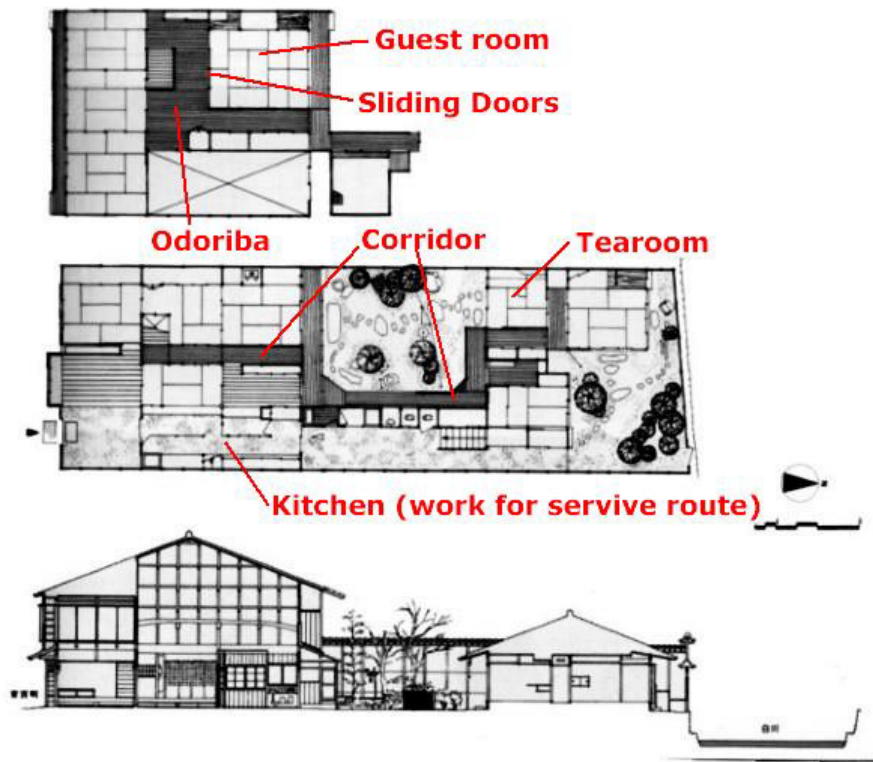


Figure.5: Plan of Shimozato-ke (Source: p.75, Process: architecture 116, 1994, ed Yamazaki, M., Tokyo, Process)

The drawing above (Fig.5) is a plan of Shimozato-ke in Kyoto. This house has several guestrooms and a tearoom. The most significant difference between Machi-ya and Ocha-ya is an installation of internal corridors in the layouts. The corridors isolate rooms and supply them privately. The wide corridor next to the staircase on the first floor is known as “Odoriba” (dancing place). Geisha dancers use this space as a dance stage, which guests can view by opening the sliding doors of the guest room.

3.Result

3.1.Convex analysis and ceremonial territories of Machi-ya

The figure below (Fig.6.) is a result of convex analysis of Machi-ya and its maps of cultural territories. From the result of convex analysis, it is clear that the kitchen and dining room are situated in the most integrated area. In daily life, these rooms are the most frequently accessed places. Dwellers of the house entering through the entrance hall and then go up to the floor from the kitchen. Therefore, the daily path of Machi-ya can be considered to synchronize with the result of convex analysis.

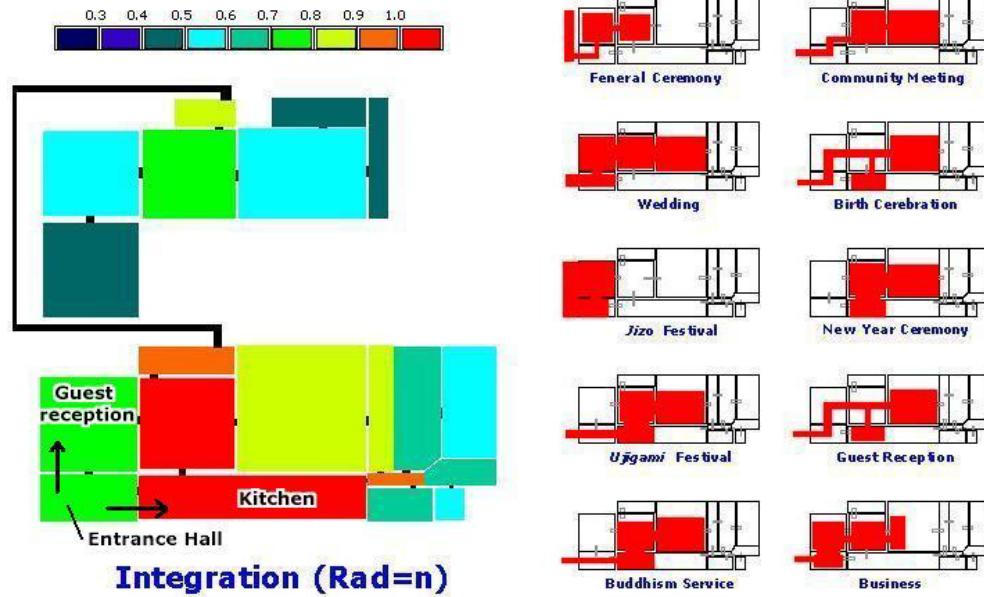


Figure.6: Result of convex analysis and cultural territories of Machi-ya (Author's copyright)

As for maps of cultural territories, they can be divided into two groups. From the entrance hall in Machi-ya, there are two routes. The first group use the route via guest reception, which contains the funeral ceremony, community, guest reception and so on. The second group, Ujigami festival and Buddhist service, take another route via the kitchen. In this type of house, dwellers think of the kitchen as “back” space, which they therefore would not to guests. But a Buddhist service is regarded as an internal ceremony for the family, hence they use the back route. Comparing this to the results of convex analysis, it is reasonable to suppose the daily path and paths of internal ceremonies are found to be economical with the reason that kitchen is more integrated than the guest reception room.

3.2.Convex analysis and ceremonial paths of Suki-ya

The drawing below (Fig.7) is a result of convex analysis of Suki-ya and traces of two paths in the layout. The result demonstrates that the most important tearoom is located in the most segmented area. Roji is less integrated, therefore, the rule that guests have to pass through Roji before entering the tearoom has the intention of bringing them to the segmented place.

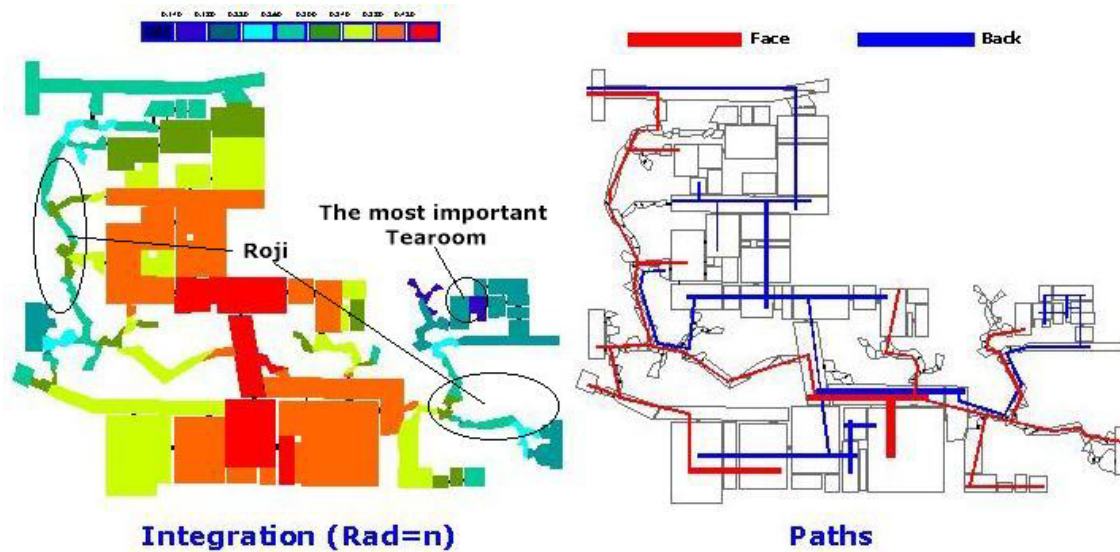


Figure.7: Result of convex analysis and traces of paths of Suki-ya (Author's copyright)

As to the map of paths, two routes in Suki-ya seem to be very distinguished from each other. The host uses the face path, entering the tearooms from a different entrance. It can be read from this that the designer intended to keep their paths separated. The mean integration of the face path is 0.3063. It is less integrated when compared with that of the back, 0.3275.

The face path and the most important room are located in segmented areas. In contrast, the back path goes through more integrated convexes. The guests have to enter the tearoom via Roji in a formal tea ceremony, However, the host uses another shortcut in order to supply tea functionally. Therefore, these paths are diverse.

3.3.Convex analysis and two paths of Ocha-ya

Next figure (Fig 8.) is a result of convex analysis of Ocha-ya. From this analysis, it is clear that the corridor is integrated. Compared with Machi-ya, the kitchen is less integrated. It is likely that the kitchen does not have a function as a working path in the same way as Machi-ya.

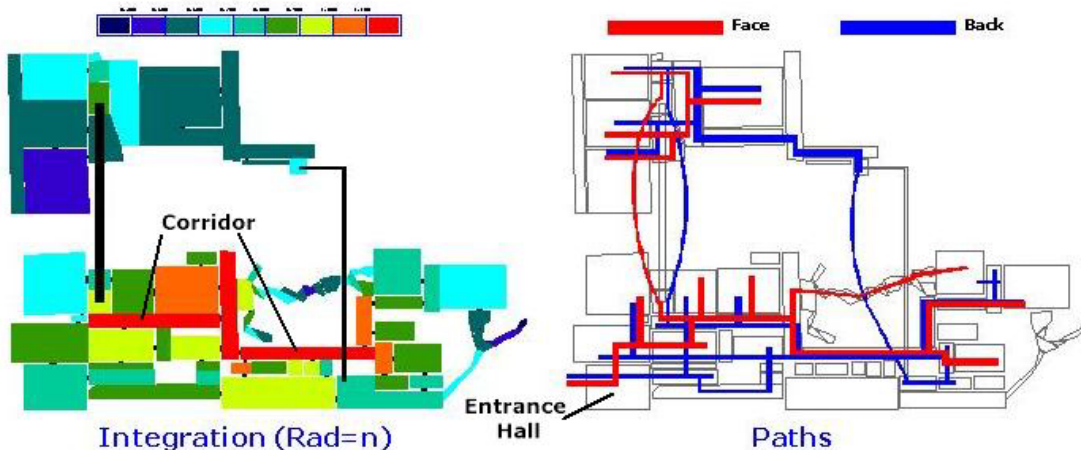


Figure.8. Result of convex analysis and traces of paths of Ocha-ya (Author's copyright)

There are two routes from the entrance hall as with Machi-ya. The mean integration value of the face path is 0.7498. Compared with the back path, integration value is 0.7841; it is clear the back path is more integrated. In Ocha-ya's case, the face path and the back path overlap much more than in Suki-ya's case.

3.4. Rituals in the three houses

Many of the studies on Japanese urban houses regard Suki-ya as one of the most important and influential architectures in the light of Japanese traditional culture. Many of the ritual rules and senses of value in Japanese space owe much to the tea ceremony. These ritual rules and senses are valuable not only in the tea ceremony but also in general Japanese space. The cultural senses of territories seen in Machi-ya and Ocha-ya share a certain similarity; nevertheless their configuration layouts are diverse. These senses are matured in Suki-ya and it is applied to these houses.

In some degree, the difference in configuration between Machi-ya and Ocha-ya is similar to a comparison between an Italian house of the 16th century and an English house of the 19th century which was carried out by Robin Evans. He writes, "In sixteenth century Italy, a convenient room had many doors; in nineteenth century England a convenient room had but one. The change was important not only because it necessitated a rearrangement of the entire house, but also because it radically recast the pattern of domestic life (Evans, 1997)." Evans points out the invention of the corridor made it possible to remove traffic from rooms and build up a network in the house. The installation could convert a house from filtration to canalisation. Therefore, it is reasonable to assume that Ocha-ya is the product of canalisation, as Evans argues in this comparison.

By means of the invention of canalisation, Ocha-ya and Suki-ya show their networks more clearly than Machi-ya. The ceremonies in Machi-ya are based on the spatial rules matured in Suki-ya. The network, the back path, is the product of the process to physical entropy. At the same time, the face path is the product of the process to ritual entropy.

The structure of Machi-ya is difficult to see because of the paths mixing and overlapping in the same space. However, by comparing it to other houses, it could be intelligible. Even Machi-ya seems to be simple; nevertheless, it has very complicated structure.

4. Conclusion

Machi-ya is the vernacular architecture of Kyoto. The spatial layout of the house seems to be very simple. However, the ritual structure in the house is not simple. It is constituted of a complicated axis of time and mixed worldviews. Because of the piled worldviews of many dwellers in several generations, the vernacular architecture can have higher entropy. Amos

Rapoport proposes, in 'House Form and Culture', that vernacular buildings are less the result of individual desire than of the aims and desires of the unified group for an ideal environment (Rapoport, 1969). Vernacular architecture is considered to reflect highly the worldviews of people and high entropy.

The vector to entropy in space is not single but plural. For example, up to this point, two processes to entropies, physical entropy and ritual entropy, have been argued. In the long span term, vernacular houses have tried to satisfy it to have higher physical entropy and ritual entropy. The dual process of vectors in the space makes a space the product of several factors.

The partiality toward boundary is a notion to find another process of entropy. The vector to higher entropy can lose itself at the same time, because there is no vector when it comes to entropy. Eventually, partiality toward boundary works for finding another worldview, because boundaries divide matters in more than one. Therefore, the Japanese partiality toward boundaries is concluded to be a notion to keep vectors working continuously in space, and the notion produces the concept of Oku [the depth] in Japanese houses.

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