

The Ambiguous Boundary between Buildings and Environment: *Exploring the Interpretation of Traditional Aesthetic in Contemporary Japanese Architecture*

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Abstract

At present, nature is becoming more and more important in people's mind. It is a very popular way to combine nature and humanity in architecture. Japanese architects have deep research and attainments in this respect, and combined with Japan's unique humanistic care characteristics, can make the whole architectural style more lifelike. This paper will analyze the architectural style of Japan from several aspects and put forward its own views.

Keywords

Japanese Architecture, Harmony between Humans and Nature, Traditional Aesthetics

1. Introduction

Humans originated from, grew up and developed in nature. The rapid development of modern technology and a large number of growing cities have caused environmental problems, such as global warming, environmental shortages and extinction of species. People are gradually beginning to notice the importance of coexistence with nature. The topic of creating harmony between man-made structure and nature has become more important in the 21st century. From the perspective of architects, the aim now is to use a more modern approach to make the buildings organic, environmentally friendly and sustainable, which in another word, might challenge the relationship between architecture and nature. According to Kengo Kuma's foreword of "Traditional

Japanese Architecture: An Exploration of Elements and Forms”, it is quite likely that Japan’s building tradition will be rediscovered as something very new. A great deal of knowledge to save the earth’s environment also is hidden within this tradition. Since Arata Isozaki recently won the Pulitzer Prize in 2019, the field of Japanese architecture has now contained eight winners and has attracted much attention. [1] The development of Japanese architecture is deeply rooted in its traditional culture and national spirit, which is based on conforming to the trend of the times. [2] Although today’s Japanese architectural creation and theories show a diversified development trend, they are invariably showing an ambiguous nature in terms of space, functional liquidity, and architectural form. [3] This kind of ambiguousness is more or less based on the blurry relationship between nature and architecture, moreover, it is also from the inheritance and development of Japanese culture and architectural tradition. As Tadao Ando once said, “Living in harmony with nature is a uniquely Japanese culture”.

This paper will focus on the ambiguous boundary between the inside and the outside in the public space of contemporary Japanese architects. [4] It explores the theories of outstanding contemporary Japanese architects and examples of their practices for public spaces in Japan and summarizes the relationship between nature and contemporary architecture, such as Kuma’s interpretation of blurring architecture in Stone Museum using his theory of drifting particles. In addition, this article will also reference how contemporary Japanese architects have applied ambiguous expressions to public buildings around the world. For instance, the Serpentine Pavilion 2019 was designed by Junya Ishigami. In this way, the traditional view of the Japanese style is retained, but it is integrated into the local society with the local culture. This kind of architecture not only preserves the integration of architecture and nature, but also promotes the development of globalization, which is the leading trend of contemporary architecture. [5] The purpose of this dissertation is to examine the ambiguous expressions of contemporary Japanese architects on the inside and outside of public spaces and analyze how they have spread and applied their traditions around the world.

To begin with, we will explore the origins of the search for traditional Japanese aesthetics and how it influenced contemporary Japanese architecture after the second world war. Chapter two analyzes the architect’s theories and its application in Japanese public projects, ranging from the traditional engawa and Kisho Kurokawa’s “grey space” to Kengo Kuma’s “particle buildings” and the “weak architecture” theory by Sou Fujimoto. The technique is divided into three aspects: the space under the eaves, the surface material, and the fluidity of the space, and combined with the different architectural theories for in-depth analysis. In the third part, in order to find out how Japanese architects integrate their architectural ideas with different contexts, their public works in the UK will be introduced. [6]

2. How does Japanese Traditional Aesthetic Influence the Development of Contemporary Architectures?

After the end of the Second World War, the growing economy led to the revitalization of the manufacturing and construction industries in Japan. [7] The nation had reached the critical moment of modernization. In architectural practice, the recognition of “Japanness” began in the early 1930s. Overlapped with the adopted modernism of Western architecture, the problem of Japanness had also begun to awaken. The so-called “Japanness” was proposed by Arata Isozaki after reviewing this process in 1970. [8] Geographically and mentally, as an island nation, the Japanese borderline vanished into the ocean. It was an insular nation that contained merely a closed, self-sufficient community (See **Figure 1**). The residents have no need to solicit their own characteristics and cultural core. The discussion around this would be trapped in a circle of self-reference. The stylization can be formed after an external perspective interacted, today considered worldwide as emblematic of the Japanese aesthetic. Nevertheless, this aesthetic



Figure 1. Architecture, Nature & People (2019), Coeda House by Kengo Kuma in Shizuoka, Japan, photo by author.

emerged far earlier than the rudimentary Japanness described here during this critical period. Due to Japan's unique geographical location, local customs, and long-term influence from Zen philosophy and Taoist thinking, this island nation had given birth to a unique aesthetic concept. They are fond of the lonely beauty of returning to the essence of things, which is also the imperfect and non-eternal beauty of things, and they are also intoxicated by the beauty of momentary sorrow and sadness of falling flowers. [9]

Monono-aware is another aesthetic idea that was proposed by Motoori Norinaga, who was a philosopher from the 17th century in Japan. [10] It is an aesthetic taste that widely exists in various fields, such as Japanese literature and art. According to the interpretation of mono-no-aware in <Kojien>, it means that "the perceptual object and the perceptual subject's moving feelings resonate and reach a state of harmony and unity". [11] Judging from the local culture, the unique natural geographical environment has gradually cultivated the Japanese people's feeling of intimacy and awe for nature. Pantheistic thoughts in Taoism are the embodiment of the Japanese primitive worship of nature. Japan tradition religion, Shinto has owned legends of thousands of gods since ancient times, and most of these gods originate from nature. [12] Both can be gods, reflecting the intimacy of man and nature. Ancient religious beliefs make the Japanese think that everything in nature is "hearted" and must be perceived, observed, and understood. These natural landscapes are closely related to people and enable people to reflect on life in them. [13] People face different objects, grasp the state of sorrow with different emotions, in different emotional forms, the human mind is moved, reflecting a closeness between human and nature. These unique perceptions and pursuits of beauty have constructed Japan's unique aesthetic cognition, and this aesthetics have also continuously spawned the emergence and development of ambiguous culture, and have had an indelible influence on contemporary Japanese architectural art. [14]

Under the leadership of older architects such as Maekawa Kuno, the Japanese architectural community began to discuss issues related to the traditional return and thinking of modern architecture. (See **Figure 2**) They started thinking about absorbing the essence of modernist architecture and localizing it for Japan. During this period, various theoretical arguments emerged, although failed to reach a generally agreed conclusion, but the significance of the theoretical discussion can be undoubtedly entered into the annals of history, explaining the era of Japan's "Giyofu architecture" that was a style of Japanese architecture which outwardly resembled Western-style construction since the Meiji Restoration at the end of the 19th century, has ended. [15] Japanese architects have established their own international status and confidence in continuous practice. In the same vein, the culture and form of modern architecture with its own characteristics are formed. Although nowadays, the Japanese architectural field emphasizes the creation and individualization of the project, their designs always show the blurry boundary between architecture and nature in different ways.



Figure 2. Mono no aware drawing in “Matsuzaki Tenjin Enki Emaki”, Kamakura period/First year of Ocho (1311), volume 2.

In terms of Japanese, there may be no so-called inside and outside on the grounds that the natural view of ambiguity has long penetrated into their blood. This kind of natural beauty is reflected everywhere in traditional Japanese architecture, for example, in the traditional Japanese teahouse in the 14th century. [16] The thatched sloping roof was a euphemistic response to the building in terms of nature form and material. The sliding door (fusuma) that can move freely horizontally and even detachable that gave users a panoramic view of natural beauty. The translucent window paper (washi) like a film allows you to feel the changes of the seasons even when you are indoors. The space under the waves (engawa) with Japanese characteristics is an even harmonious transition between indoor and outdoor, and the boundary through it becomes more ambiguous and softer. [17]. Absolutely no one will repair the mottled and cracked on the wall of the teahouse, because this is the trace left by nature. Contemporary Japanese architects have certainly realized these characteristics of Japanese aesthetics, and this view of the environment is always controlling their architectural creations. (See **Figure 3** & **Figure 4**) They continue to follow the path of exploring the combination of Japanese architectural tradition and modernity and display the basic principles of respecting and integrating with nature. [18]

3. What Methods Contemporary Japanese Architects Use to Express the Ambiguous Boundaries between Building and Nature in Contemporary Architectures?

As for architectures, the grey space is similar to the intermediary between the enclosed space inside and the open space outside. [19] To some extent, this kind of transition space erases the boundaries between the interior and exterior of the buildings, making them into an intertwined whole, and the coherence of the



Figure 3. Japanese tea house Iho-an Tea Hut Ihoan Historic Chashitsu at Kodaiji Temple Kyoto, photo by Alex Maxim.



Figure 4. Chochiku-kyo tea room interior view.

space eliminates the barriers between the internal and external spaces, giving users a natural and organic overall feeling.

The proposal of the grey space is the refinement of the essence of traditional Japanese architecture by Kisho Kurokawa. “The engawa is interior space beneath the eaves, however, at the same time, it is part of the exterior space of the garden.” There is no doubt that this architectural element is a typical representative of grey space, which has been popular since the Middle Ages in Japan. The eaves of a traditional Japanese house are profoundly inseparable from the geographical environment of Japan’s island nation. Japan is surrounded by the sea. The warm ocean climate makes substantial rainfall for Japan. Therefore, rain-proof and damp-proof are factors to be considered in traditional Japanese architectural design. A far-reaching eave can not only prevent the wall from being wet by rain, but also solve the outdoor traffic problem on rainy days (See **Figure 5**). In addition, during the hot summer, the eaves that have a profound effect can also play a role in covering the sun. The warm sunlight is filtered by the eaves to become softer and more intimate. Engawa provides a place for people to take refuge from the summer heat, as well as a playground for children and social space for guests. Simultaneously, engawa produced an ambiguous boundary between architecture and nature, giving the inner and outer spaces a sense of infinite extension. This vague area under the eaves is the intersection of internal architectural space and natural external space.

Although the period of westernization in Japanese architecture field has led to a decrease in engawa, contemporary Japanese architects must have recognized that the deep eaves are of irreplaceable importance as a symbol of traditional Japanese architecture, and the ambiguous and vague sense of interior and exterior created by the space under the eaves is its essence (See **Figure 6**). From the imitation of form to the inheritance of spiritual connotation, Japanese architects are continually working hard based on their traditions. The engawa is gradually reappearing in modern architecture in innovative ways.

In creative practice, Kurokawa often transforms nature into the interior, while



Figure 5. Porto Academy Summer School: Jun Igarashi Lecture (2016), screen shot, 8:02.

extending the interior to the exterior. In this way, the interior and exterior, nature and architecture interrelate with each other, maintaining a balanced relationship. Head Office of the Fukuoka Bank, designed by Kurokawa in 1971, was a representative building that's reflected his theory of "grey space". The bank is located on an 80 m × 49 m site in the business district of downtown Fukuoka. Kurokawa set the building height to 45 m in the design to coordinate with the surrounding buildings. He designed a large open plaza under the huge eaves constructed from the ninth floor. In this case, it forms an ambiguous space between the private office and the public square (See **Figure 7** & **Figure 8**). Kurokawa made the facade facing this space as transparent as possible and arranged the entrance access to the bank and the underground public entertainment facility. In this vast transition plaza, 200 trees were planted, and more than ten Japanese figurative sculptures were set up to indicate a peaceful and comfortable city square, recreating a space where nature and buildings mutually extend. The gray

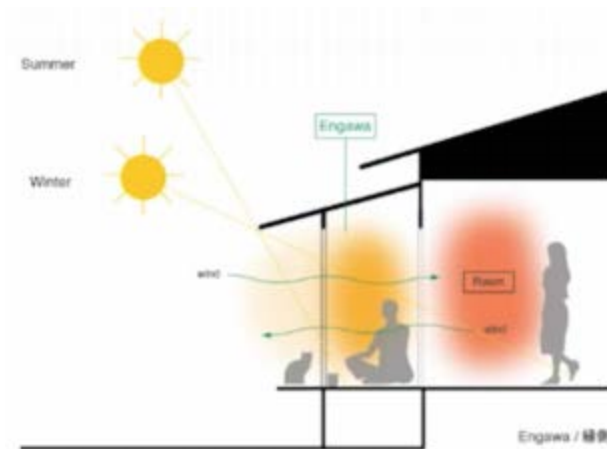


Figure 6. Porto Academy Summer School: Jun Igarashi Lecture (2016), screen shot, 8:16.



Figure 7. Head Office of the Fukuoka Bank (1975).



Figure 8. Nezu Art Museum, by Kengo Kuma & Associates (2009).

tone of the exterior wall neutralizes the building's overwhelming mass and structure of the building into a refined atmosphere. [20]

Kengo Kuma is keen on the image expression of the engawa roof. It can be said that his inheritance and creation of the form and spiritual connotation of the giant floating eaves roof has reached the realm of fire. Expressing the image of traditional Japanese architecture with an integral pitched roof and deep eaves is the gist of many of his works, and he often employs different materials to voice the form of a traditional pitched roof. One example is the Nezu Museum in Minatoku, Tokyo. [21] The exterior form of the building adopts the style of Japanese folk Japanese houses. The building color is silver-gray, gray-black, and it is integrated with the ancient trees in the courtyard. This is a Japanese contemporary building with an oriental flavor. The surrounding hustle and bustle are blocked by a quiet courtyard space. The landscape of the external garden of the building is introduced into the interior through the large floor-to-ceiling glass windows of the entrance hall, which blurs the edges of the building. [22] The eyes of each other set off, so that the tradition blends into the contemporary modestly, and the architecture has an image of space between reality and unexpectedness.

In traditional Japanese architecture, the “engawa” space provides more intersections between the indoor and outdoor, thus blurring the indoor and outdoor boundaries.

It is not difficult to found from the contemporary architecture's inheritance of the space under the eaves that Japanese architects, through practice and experience, have transformed the design of the form of the engawa space into a symbolic inheritance of their spiritual content. This method of using the eaves space as an indoor and outdoor transition space is fascinating to Japan, and it is also a great embodiment of the Japanese domestic environment concept.

The Material of the Façade

Since the 14th century, the man-made window paper “washi” had been used as an architectural element in aristocratic residents and temples. Washi paper is made by the inner bark of mulberry trees. Because they are light and thin, the paper screens provide privacy without completely blocking the nature sound. Also, the translucent washi paper produces unique effects by refracting and scattering light. As Kengo Kuma express that “When sitting in the washi room one is gently bathed in a diffused light, like sunshine streaming through trees.” [18] This organic and natural material created visually appeal as well as vague circumscription to the environment in an ancient building. Today, the use of translucent material also played a key role in expressing the ambiguous nature of modern and contemporary Japanese architecture and nature. The architects use the transparency of the material itself or control the texture of the material splicing to create a dialogue between indoor and outdoor (See **Figure 9**).

When it comes to material transparency, one has to think of the works of SANAA Architects, which are founded by Kazuyo Sejima and Ryue Nishizawa. [23] Their projects make extensive use of the material of glass exterior walls, making the building feel minimal, light and floating. “Architecture is a medium for people to communicate with the city... I keep trying and thinking about just one thing: how to connect the interior and exterior spaces of the building. Let me talk about the origin of this thinking: all people live in a vast natural environment, and once we design and build a building, it means that we separate nature with artificial objects, so in order to alleviate this inevitable Avoiding the isolation, I hope to study the transparency of building materials, and connect the internal and external environment of the building with the transparency of sight. Later I tried the transparency of other types of materials...” Sejima claimed her architectural philosophy in the lecture at UC Berkeley in 2017. [24]

This permeability of the architectural concept is also vividly reflected in the



Figure 9. Interior of a traditional Japanese house, photo by Mirjam Bleeker (2016).

practice of SANAA. 21st Century Museum of Contemporary Art, Kanazawa is the best interpretation. The museum is a shallow circular building, suspended like a flying saucer in the center of Kanazawa. The 360-degree transparent and open glass curtain wall allows the outdoor scenery to naturally blend into the interior, with a strong sense of openness. The existence of the building body disappears unconsciously, and the surrounding plants and fresh air are integrated with the artwork displayed indoors. Due to the building's daylighting and transparent design, the interior space is surrounded by soft natural light [25]. Sparkling waves, mottled tree shadows, were dissolved into this white building, and when viewed from a distance, it was like a flowing cell, floating lightly, roundly, and quietly in the forest. [12] Another project mentioned by Sejima in her lecture in Berkeley was a series of artistic residential works in Inushima. In fact, the scale of these buildings is restrained, and they are scattered on this quiet island for art exhibitions and rest. The architects used different materials to embed these small architectures within the surrounding environment (See **Figure 10**). For instant, A-Act House and C-Art house made of clear acrylic panels, the transparency made them integrated with the surrounding environment. Sejima described her initial concept of “treating the village itself as an art museum.”

Kengo Kuma claimed his architectural declaration by publishing “architecture of defeat” (2002). He advocated the disappearance of architecture, which means, architecture should be restrained and not hostile to nature. Therefore, Kengo Kuma's works can always reflect the blurring of the boundary between architecture and environment, or he called it fusion. [18] Kengo Kuma also respects the natural and local environment with the choice of building materials (See **Figure 11** & **Figure 12**). He often uses local materials such as wood, tiles and bamboo to make his works better integrated with nature. [19] Adhering to this concept,



Figure 10. 21st Century Museum of Contemporary Art, Kanazawa, photo by Osamu Watanabe (2006).



Figure 11. A-Art House, photo by Kazuyo Sejima & Associates (2010).



Figure 12. Stone Museum, photo by Mitsumasa.

when designing the Stone Museum, he formally proposed the “breaking down into particles” of the building. “Before concrete buildings came to Japan, the traditional buildings were made by small particles,” he explains. “From the roofs to the ceramic tiles, the clamps and the beams, every element is tiny, and these particles and the human body, they can make a dialogue, because both are small and both are fragile.” Kuma got the ambition to create a free and ambiguous field as usual for the project of Stone Museum in Ashino, which have three preexisting storehouses for rice made by local Ashino stone. [26] Glass obvious came into his mind originally, however, even its transparency, would form a sharp contrast to the environment. After measurement and calculation, Kuma decided to use the Ashino stone, but break them into particle—like forms. The voids created between the crushed stones allow sunlight, air, and sound to flow freely through the space and created an ambiguous atmosphere between the interior and exterior areas. [27]

In contemporary Japanese architecture, the interior and exterior ambiguity is mainly blurred through organizing the transparency of materials and particlising materials. However, this sense of ambiguity is often generated through visual

perception, establishing internal and external visual connections, staying at the level of performance. When the application of materials is combined with the circulation of space, a more comprehensive natural perception can be created inside an architecture. [28]

Liquidity of Space

Under normal circumstances, different functional spaces are separated by partition walls to ensure that they do not interfere with each other. The space that is clearly divided in this way is static, and the connection between space and space is ignored. In the creation of Japanese contemporary architects, the characteristics of fluidity and otherness of the space are achieved through different design techniques while ensuring the degree of privacy, thereby achieving the effect of blurring boundaries. In fact, such expressions benefit from Japan's limited land resources. It is basically impossible to separate the functional spaces by juxtaposition, but the pursuit of quality of life and fun cannot be abandoned because of the small space. Therefore, in the history of Japanese architecture, a variety of separated spaces appeared. Utilizing the method of space, the seemingly simple space can transform different functions within a particular time. As early as the 19th century, movable wall partitions, especially the translucent paper-covered wood lattice shoji screens and the opaque paper-cover fusuma (See **Figure 13**). They are common in formal buildings such as palaces where spaces need to be open for public functions. [29] By separating the opening and closing of the movable wall partitions, the different functions resume conversion and flow, and the space can meet the rich functional requirements. This idea has continued to this day, and contemporary Japanese architects are also keen to explore the fluidity of space to create more possibilities between inside and outside space.

Toyo Ito stated that he is committed to creating fluid space, which means the blurring architecture instead of the usual haze or blurred vision. He once said that "I prefer soft objects to hard, curved lines to straight, ambiguity to clarity, spatial diversity to functionalism, and naturalness to artificiality." Ito's personal growth experience has greatly influenced his career. Growing up in a valley



Figure 13. Fusuma, Japanese sliding doors.

surrounded by mountains always feels like a cave (See **Figure 14**). In his view, people walked out of caves, climbed down trees, and used simple geometric patterns to make places of life within the flux of nature as the ancient time. Despite the modern construction industry has long been freed from the shackles of this mobility, and isolated rooms have been built. Humans are ultimately a part of nature. For his project Sendai Mediatheque as a public library, 2000, Ito successes explained his concept into real-world practice. In the design, Ito uses thirteen bunches of tube-like columns as the supportive structure. In order to achieve blurring architecture, Toyo Ito aimed to be barrier-free, and there are no redundant structures in the interior to distinguish functions. [30] This is tantamount to walking through the forest, people could walk randomly among the space, and there is no specified one particular purpose for one particular space. “Blurring” thus also refers to the architect’s intentions on a looser to provide more considerable ambiguity between inside and out.

Sou Fujimoto, who was born in Hokkaido, was under the impact of his background as well. He used to play and run in the forest as a child. When approaching the field of architecture, he felt that his experience in the forest was significant for things other than scale, diversity, and function. Studied architecture in Tokyo gave him an amusing contrast with where he was growing up. Strolling through downtown Tokyo surrounding by all the skyscrapers, he explained, “The city of Tokyo, is like a forest made of diverse artefacts—that’s why I always think about a project without separating nature from architecture (See **Figure 15**).” Sou Fujimoto argued about “weak architecture”, which pursues the original design of reducing the boundary of the building buildings, thus highlight the strong fluidity of the spaces, and let people interact better with the space environment. As the forest is a keyword for him, the intention of Fujimoto is to create a “Primitive future” that he believes that the ideal building in the cities should be similar to the forest. Not to repair external or internal space, but

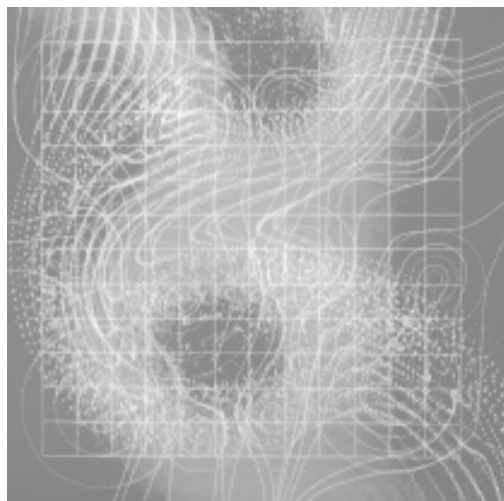


Figure 14. Ripple-like contour lines of activities occurring around the tubes, by Toyo Ito & Associates (1995).

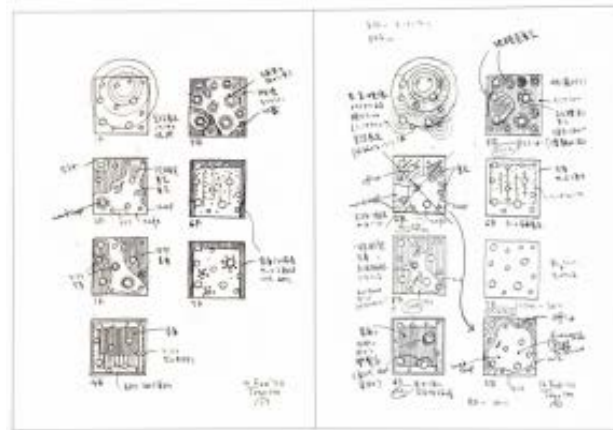


Figure 15. Plan studies of Sendai Mediatheque, by Toyo Ito & Associates (1995).

to create a rich connection in-between space. [3] In the project of Musashino Art University Library, Sou Fujimoto outlined this library to be a forest of books. Hence, there is no independent room partition, the whole area enclosed by the continuous spiral bookshelves constitutes the library. As a result, it becomes a fluid but non-homogeneous architectural shape. Users move around in the building at will. The indoor and outdoor spaces flow through the floor-to-ceiling glass and the huge square hollow structures, so that the building and nature are maximally integrated.

Another architect who pursues the ultimate transparency of space boundary is Junya Ishigami. As he once claimed, “I wish to think freely, to expand my perspective on architecture as flexibly, broadly and subtly as possible, beyond the stereotypes of what architecture is considered to be.” Hence Ishigami published “freeing architecture” (2018) as his own theory and direction in the career. His attitude for every project is to determine the appropriate structure for the site seriously and directly in order to create a flexible space that not subject to architectural conventions. He challenged the ambiguity between inside and outer context of the building. A well-known masterpiece by Junya Ishigami, KAIT Kobo of Kanagawa Institute of Technology, is a workshop without walls (See [Figure 16](#) & [Figure 17](#)). The 305 slender independent pillars supported the space are oriented in a distinctive direction, also positioned with different intervals after precise calculations. In the ground plan, these pillars randomly scattered and remind people of trees in a forest. In Ishigami’s mind, the randomness of space is a part of the essence of nature. Thus, he shaped the function of each area in an ambiguous definition for KAIT. In addition, plants inside and outside the space blur the visual boundaries through the transparent glass. In this way, one cannot identify an apparent spatial change, but can perceive the ambiguous extension of each area.

The liquidity of space is the most concentrated embodiment of the ambiguity of indoor and outdoor space in contemporary Japanese architecture. From the perspective of the relationship between tradition and modernity, the circulation

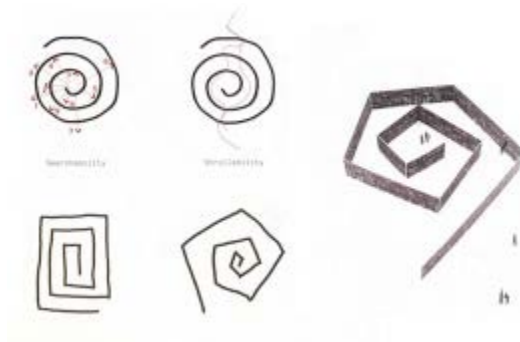


Figure 16. Conceptual sketches, by Sou Fujimoto Architects (2011).



Figure 17. Musashino Art University Library, photo by Sou Fujimoto Architects (2011).

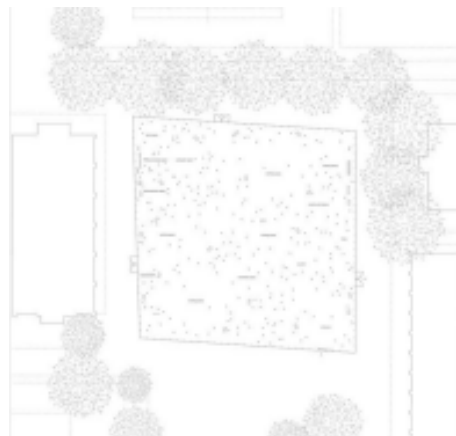


Figure 18. Plan of KAIT, by Junya Ishigami (2008).

of the functions of contemporary Japanese architecture is the inheritance and development of the tradition. Different functional requirements and the blurred relationship between inside and outside is maximized. Judging from the relationship between people and architecture, contemporary architecture pays more attention to human experience and feelings (See **Figure 18** & **Figure 19**). Architects guide people on how to contact each other, changes in interpersonal relationships bring about changes in the building, and give people more choices in architectural spaces. Moreover, through the flow between spaces, the building is



Figure 19. KAIT, photo by Jerone Verrecht (2008).

integrated into the environment, making the entire city closer.

To sum up, the ambiguous nature of contemporary Japanese architectures for indoor and outdoor is directly expressed through the carrier of architecture. At the same time, it could express all aspects of the building, from the external architectural form to the building materials, and the fluidity of spatial functions. Although their expression methods are diverse, the spiritual core and initial motivation behind its multiple conveying are unchanged, that is, the respect of nature as old as its existence.

4. To What Extend do Contemporary Japanese Architects Indicate Their Traditional Aesthetics in Different Cultures (In the UK)?

As Kisho Kurokawa stated in “from metabolism to symbiosis”, “Western architecture is founded on a confrontation with nature. Japanese architecture, on the other hand, existed within nature.” [20] The differences between Western and Eastern cultures are like stones and wood. The former clearly separates the inside from the outside. The western buildings used to design with well-developed walls to protect the interior space from external threats since Roman times. The latter’s basic structural unit is not the wall but the pillar, hence, the outer and inner space became free and flexible. “Nature and human dwellings intermingle in a symbiotic relationship.” However, in the context of globalization today, Japanese architects also have many successful cases in the western countries, with carrying forward their Japanese spirit. Their architecture still unconsciously reflect the Japanese architect’s respects for nature, and can combine the local environment to express their ambiguous expressions of interior and exterior with profound grasp and sublimation. Therefore, it is worth exploring how contemporary Japanese architects can maintain their original intention and disseminate local culture in a total different environment.

Victoria & Albert Museum Dundee is a masterpiece should be mentioned that is designed by Japanese architect in the United Kingdom. Kengo Kuma's works are known for his desire to restore the traditions inherent in Japanese architecture and reinterpret them in the 21st century. In 2018, his first project in the UK, the V & A Museum Dundee, has been completed. During the site research, Kuma explained that Dundee was used to be a Scottish prosperous harbour city. However, the raising of a large number of industrial warehouses on the banks of the River Tay in the 20th century blocked the interaction between local residence and the river. Therefore, Kuma's new design had the ambition to reconnection of the Dundee culture and the ocean. Taking cliffs in northern Scotland as a concept, the architect try to explain the randomness of nature as a character to the architecture. [18] Kuma demonstrated his particle concept by stacking long slabs at different angles to achieve a ambiguous facade, which allow the building to integrate with the natural environment and the surrounding landscape. (Kuma, 2018) Even more striking is that the hole of the museum design as a gate, which allowed citizen extend their urban activities to the waterfront. In fact, this view comes from the traditional gate (Torii) in Shinto shrines that appeared in Japan as early as A. D.922. Torii of the shiines in Japanese traditional condition could be understand as a portal from the exterior profane world to the interior sacred space where the kami (Japanese Shinto spirits, mainly regard as nature) dwell (See **Figure 20** & **Figure 21**). From an architectural perspective, this kind of gate without doors is a design that uses voids to reinforce the connection between nature and people. Again, Kuma inherited the essence of the traditional Japanese architectural elements after deep understanding, and transformed it as a architecture on the land of Scotland to reconnection Scottish with their nature. This building is undoubtedly a marvelous interpretation of bringing Japanese culture to Western countries. A huge corner of the building overhangs the sea, and users look down through the glass in the room as if they were on the sea. Kuma's design of this museum shows his traditional design concept incisively and vividly in different cultural backgrounds.

Another good practice is the Serpentine Pavilion 2019 designed by Junya



Figure 20. Kengo Kuma interview: V&A Dundee museum | Dezeen, (2018), screen shot, 1:25.

Ishigami to build a slate roof on the ground in Kensington Garden. “A stone creates a landscape, and a landscape usually sits outside of a building. I tried to create this landscape that exists outside, inside the building itself.” Respecting the context, his choice of stone as the roof was taken from the slate roof designed initially in the Serpentine Gallery of Kensington Gardens in the 18th century (See **Figure 22** & **Figure 23**). This decision did not destroy the existing natural



Figure 21. Kengo Kuma interview: V&A Dundee museum | Dezeen, (2018), screen shot, 1:53.



Figure 22. Torii of Meiji Shrine, photo by author (2018).



Figure 23. Kengo Kuma interview: V & A Dundee museum | Dezeen, (2018).

environment. Instead, he sought the balance between artificial structure and the existing nature. Ishigami also celebrated his philosophy of “free architecture” in the historical park of London. Although the roof was made by stone, Ishigami avoids the traditional roofs with angular corners. He arranged a cluster of scattered rock that seemed to protrude from the ground of the surrounding park. In the concept map, the gradually smooth lines of the slate and the corrugated carvings on the slate free the material from the rigid stereotype. The space under the eaves also maintains freeness, without any barrier to the outside nature. On the one hand, the pavilion blurred the boundary between the building and the environment by echoing the environment (See **Figure 24**). On the other hand, the architect reflected it to his own design philosophy through innovative design elements to give building its own volume in the environment.

However, the entity of the pavilion deviates from the concept of Junya Ishigami, which is the product of compromise after fierce cultural conflict. For instance, after the wind test in the United Kingdom, in order to prevent the entire structure from being blown away by the wind, there are more columns than originally thought (See **Figure 25**). Moreover, a series of clumsy plexiglass curtain walls were installed to cut off the free-flowing space under the ceiling. In accordance with the original idea, the exhibition hall can be entered from all directions, and children can climb up and down on the roof. Nevertheless, the UK’s health and safety regulations have made this assumption into bubbles. As the curator, Beatrice Galilee reviewed that “Ishigami proposes an architecture for a world that doesn’t care much about buildings,” Under the influence of globalization, buildings around the world could be built with the same details and materials, such as concrete, steel and glass. However, by studying the British projects of two Japanese contemporary architects, we once again realize that the aesthetics of ambiguous relationship between nature and architecture is deeply rooted in Japanese mind. These concepts do not change because the building was

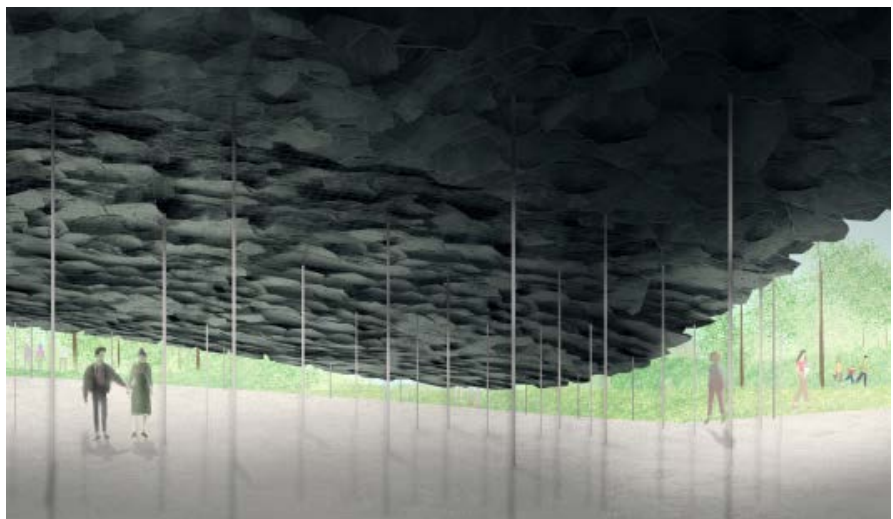


Figure 24. Ideal Drawing of Serpentine Pavilion 2019 by Junya Ishigami (2019).

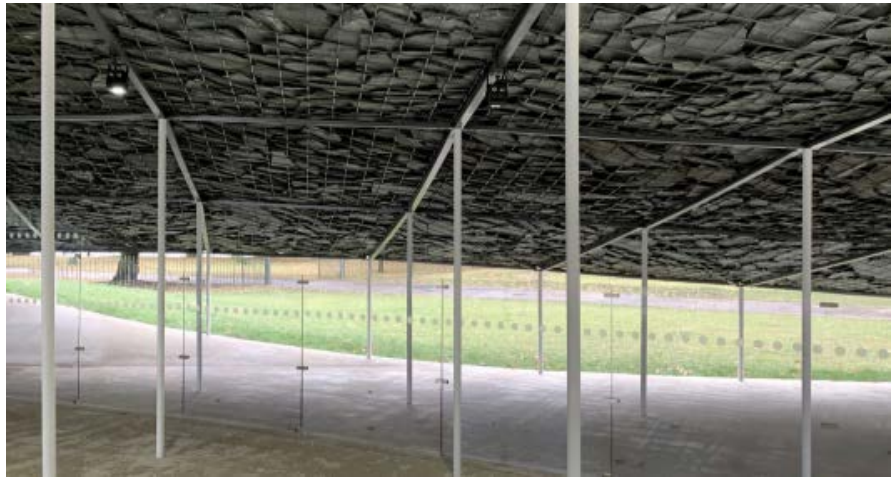


Figure 25. Completed work of Serpentine Pavilion 2019 photo by author (25.09.2019).

built in a different geographical environment and cultural background. Japanese architects carry on the ideological inheritance of the essence of traditional culture, and combined with the geographical features and existing local materials to illustrate their native culture on the architecture worldwide. Although there are uncontrollable natural factors or different construction laws need to be consider further in foreign culture, contemporary Japanese architects have spread the ambiguous boundaries of traditional Japanese culture to the world.

5. Conclusion

The Japanese concept of the relationship between architecture and nature is worth learning and summarizing. By analyzing the fuzziness of indoor and outdoor space in Japanese contemporary architecture, we find that the existence of fuzziness is deeply rooted in Japanese traditional attitude towards nature. People begin to find harmony with nature, return to the origin, coexistence with nature will become a key concept in the future of architecture. In the process of globalization of architecture, new concepts, materials and techniques are constantly emerging around the world. Material culture and spiritual culture are converging gradually. As architects, we should not only recognize the advanced development of the world, but also recognize and reflect the past and present of culture. If you lose your basic skills and go with the flow, your future development prospects will be limited. One of the reasons Japan became an architectural superpower was through a faithful study of Western modernism, but this alone cannot explain Japan's success. It is also achieved through unique growth and change, which is the foundation of Japanese culture. Therefore, the continuation of the tradition is particularly important. Tradition is inherited and developed in the process of comprehensive interpretation and sublation. It is an eternal proposition of architecture to pursue the rebirth of tradition in modern times. A review of the development of contemporary Japanese architecture, from the simple imitation of traditional forms, evolved into the expression of traditional aesthet-

ics and the deeper connotation of natural codes. Only by seeking the true essence and connotation of tradition can we further change and develop in the world context. This paper studies the fuzziness of Japanese contemporary architecture and discusses the interpretation and inheritance of Japanese architectural and cultural traditions in modern and contemporary architecture.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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