

Comparative Study of Architectural Conceptions Between the East and the West

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Abstract In contemporary modern architecture, it can be said that Western modern architecture, which has advanced in technology and ideology, is leading the world architecture today. However, because it is pointed out that modern architecture, mainly represented by Western architecture nowadays, is based on the crystal of Western civilization's consumption and capitalist culture, and because it seems not absolute for the eternal sustainable development of the Earth and happiness of Humankind, it is assumed that the new conceptions of Architecture should include the cultural, ecological and environmental characteristics of the region. So because it is thought that the latent characteristics of East Asian architecture including China, Japan and Korea has the advantage of reducing the deficiency of Western modern architecture and contributing to human civilization, this study was written to find a new direction of architecture by finding the differences of architectural characteristics(intrinsic and extrinsic) in the interior of the architectural result through comparison between the Eastern and Western architecture.

Keywords: Architecture, Architectural conception, Comparative study, East and West

1. INTRODUCTION

Nowadays, buildings in one country are almost the same as others in the world. With the internationalization movement in the 20th century, building construction methods, materials, and design theories are largely similar throughout the world as economic exchange has been growing. Consequently, we can easily see the same building styles in most cities in the world.

But, if we examine architecture in one world region in detail, we can find that there are some subtle differences in expressions of building design. Some prominent Japanese and Chinese architects had received the Pritzker Prize, considered as the Nobel Prize of Architecture in the west, due to their successful transformation of traditional culture into designing a building popularly. But invisibility, which has been valued for a long time in East Asian countries(Amos Ih Tiao Chang, 1956) and has

made its some differences with the Western, is often mentioned as the characters of their buildings. So it can be assumed that there is a deep sympathetic moment in East Asian architecture between buildings and people beyond visible materials, proportions and colors, which have been main components in the western architecture. I think these kinds of traditional values in East Asian countries definitely influence buildings that are looked at differently than those in the western world.

Richard Nisbett(2003) conducted psychological experiments to see if there were differences in thought between the people of the west and the east. Western people thought about the noun more than the verb, which showed they had more interest in what something is rather than how it does. Eastern people instead linked things based on the aspect of doing.

As like this, in this paper, I would like to explore what lies deeply in East Asian buildings and what is the engrained experience of buildings in the East, that make us feel differently from western buildings, by comparing eastern and western architectural conceptions.

2. RESEARCH METHODS

It seems to be challenging to compare characteristics of western architecture and eastern architecture. Because these two areas had different historical development and different conceptions of life philosophy, it seems not to be possible to make a 1:1 comparison between these two. Also, it is very difficult to extract the examples to what extent from the whole period of time from the ancient past to the present. But despite

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the difficulties and the inevitable logical leap of making a comparison between each pair, I believe that the insight gained from the findings of different cases between two areas will help identify the characteristics of East Asian buildings and reveal new meanings that can expand existing phenomena and theories in the western world.

The word East in this article is used for indicating East Asian area of Korea, China, and Japan where have been dominated by the philosophy of Buddhism, Confucianism, Taoism, and Fengshui. And the word West is used for referring traditional western Europe area where have been dominated by the Greek, Roman culture, Christianity, and Humanism(Ian Morris, 2010).

I referred some prominent books about traditional Eastern architecture, for example, *Intangible Contents in Architectonic Form*(Amos Ih Tiao Chang, 1956), *Architecture and Philosophy*(Ye, 1960) as to get inceptions on architectural conceptions of Eastern architecture, and also some prominent books of western architecture, eg., *The Concept of Dwelling*(Noberg C.N. Schulz, 1985), *Complexity and Contradiction in Architecture*(Robert Venturi, 1977). Even though these books can hardly explain the essential characteristics of local architecture, the limitation of this paper is based on this point.

My research is methodologically based on a romantic ideology that “tries to clarify something that was obscure (the concept of people) with the help of something even more obscure (the concept of language, architecture in this paper). Thanks to the symbiotic correspondence thus instituted, two contingent and indefinite cultural entities transform themselves into almost natural organisms endowed with their own necessary laws and characteristics” which is told by Giorgio Agamben(Jon Solomon, 2014).

In this article can be proposed two different stages in architecture; one is explicitly mentioned architectural conceptions which are about structures, materials, colors, and systems of a building for practical meaning of planning a building, and the other is intrinsic architectural conceptions in human mind for corresponding with human existential needs which are like centrality, relationship, and the balance between nature and human being, etc. The later one is related with prerequisite basic categories of planning a building; Layout, Plan, Section, Typology, and Attitude. And I tried to suggest differences between the western and the eastern architecture in these two different stages.

3. EXISTING COMPARATIVE STUDIES ON THE EAST AND THE WEST IN ARCHITECTURE

After the authoritative research on the western vision for the east of Said's Orientalism(1979), the characteristics of the east are studied under the name of areal researches, which is based on the exclusive conception that the west is the main stream, to be included in the western academic stream. But in some Asian countries including Korea and China where their identity should be discoursed as the same vision with that of the western

do use the terms of the east and the west for discriminating their architectural characteristics from western architecture.

Zangpa published a book, “China and the West, the aesthetics”, which insisted the future way of harmonizing the differences between the two different cultures(Zangpa, 1999). And Lee Wonher said ‘the western mentioned they took the space in a building but the Chinese conquered the nature when they saw the Chinese architecture’, in his book, “the principles of Chinese old architecture”(Lee, 2000). Besides these, Lin Yutang and Tu Weiming were prominent scholars who had published the books explaining the background of the characteristics of the east and comparing them with the west.

The debates between Kim, Sungwoo(2006) and Lee, Heebong(2006) on architectural conceptions between the east and the west in architectural history society in Korea are very famous cases. Kim suggested spatial characteristics and conceptual images of Korean traditional buildings, as rhythmic vitality and haptic sense, and Lee counteracted to his opinion by the logical tackling. The conclusion of this debates showed that to differentiate the characteristics of the east from the west was logically very difficult even Kim suggested some meaningful conceptions of Korean traditional architecture comparing with western architecture. I agree with this result of that it is narrowly possible to compare the characteristics of the east and the west, but because some findings of comparative researches make people be insight greatly, it could be tried.

Recently Lee, Sanghun(2017) wrote a book about this theme, “The identity of Korean Architecture through the different view point from western architecture”, and explained it related with the nature and symbolic expression of it. He showed 9 big categories which explain the differences of the two; Architectural conceptions, Spatial conceptions, Cognition and Experience, Hierarchy, Inside and Outside, etc.. Mostly admitted analyzed contents easily by Koreans. But because the contents of this book is read superficial and is not clearly articulated to explain the characteristics of Korean architecture in my opinion, I would like to suggest an alternative viewpoint to differentiate the architecture of the west and the Korean.

In the end, these opinions mentioned above acknowledged that there is a fundamental principle that creates the characteristics of the east and the west in architecture, and it described what it is and how architectural characteristics and experiences arise accordingly. This study is also in same context with these studies, and considering that there are not many studies in this field, it is based on the necessity of as a stage of accumulating individual case studies, and so an additional case analysis is being attempted in this study.

4. SOME INTRINSIC DIFFERENT ARCHITECTURAL CHARACTERISTICS BETWEEN THE EAST AND THE WEST

(1) Allocation of Things

In East Asian countries, spaces is hierarchically or systematically layered to be related one another based on the rule of Chinese theory called Iching (the book of changes Zhouyi),

(Richard Rutt, 1996) that is relevant to Confucianism. They had believed in orientation that whole world and all things were determined by the harmony of negative and positive(Yin & Yang) developed with 5 elements; water, earth, metal, wood, fire (the positive and negative relationships between these elements are, for example, water produces wood and conquers fire, fire produces metal and conquers wood, etc.), which symbolically stand for 4 orientations(east, west, south, north) and center, 5 animals(tiger, peacock, tortoise, blue dragon, yellow dragon) and 5 colors(black, white, yellow, blue, red) and so on. So the location of all things including buildings which has meanings in the world should follow the rule of proper positions corresponding with other things in the aspect of YinYang harmony; the order of cosmos. Not only for the case of locations of building types determined by the meanings in a city but also for the cases of complex buildings which has many functional meanings should follow this theory. They emphasized the position of meaning where they were properly allocated in the world very much in order to maintain the abstract order of cosmos.

In the west, when we see the city of Rome, we cannot find the hierarchical rule but very harmoniously layered facilities in a city, palaces linked geometrically well with neighboring buildings, as connecting well the materials and structures between old and new. I think they had no restrictions to build a building except functional, aesthetical, or practical structural conditions, not as like revealing abstract rule seemed in the east. They believed their reasonable, political or cultural ability in deciding the location of elements based on humanism of the era even from that period(Morgan,1960)

(2) Identification of Buildings from Nature

In East Asian countries, they had believed in divine power existing in cosmos, which is always flowing in the world. And they believed that human body was also influenced by this stream as a part of it, which was called CHI (or Qi meaning for energy force, Kim, 2006), so they did not want this stream to be stuck. If we try to interpret it in the aspect of science, the flowing can be interpreted as invisible connectivity of energy with wind, light and nature. According to this theory, builders should open the wall in a building in order not to block this stream of nature, and manipulate the size of the openings to moderate the stream. So appropriate opening and enclosure of space (inner space and exterior space as well) were very important prescriptions in designing a building. They believed building as a part of nature should be operated like a nature.(Ahn, 1980)



Figure 1. Diagram explaining the CHI stream among buildings
(Source: Ahn,1980)

In contrast, in western countries, buildings enclosed open into the center blocking the outside, and inner space was also very well enclosed by the walls. It is because of not only the difficulty of making windows big in brick structure but also the advantage of blocking it from the outside attack(Schulz, 1986). But I think the latent reason why western people preferred the enclosed space is that this space can be easily identified with the residents without the comprehensive understanding of the complicated natural environment.

(3) Ways of Experiencing Architecture

The picture of fig 2. shows multi viewpoints immersed in which enables person who is looking at the picture seem to be standing everywhere inside of the picture. It was drawn 16 century in Chosen Dynasty(Ahn, 1980), they tried to convey the reality to the picture with multi viewpoints. It can help to explain the whole building layouts as it is without prejudice of emphasizing a certain place than others to some extent. And this kind of multi viewpoints tell us the dynamic characteristics of space, which is not fixed to one viewpoint.

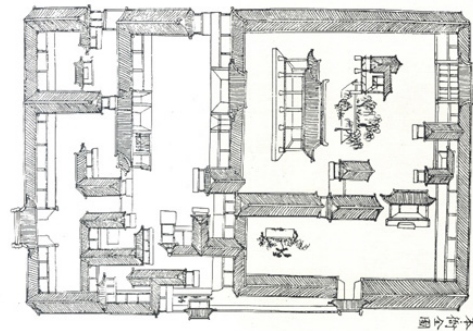


Figure 2. Partial Drawing of Chosen Palace had multi view points
(Source: Ahn,1980)

In contrast, in 15century, the perspective drawing was invented in Italy (Edgerton, 2009). Perspective drawing has been a very powerful tool to describe the reality as it is. It conveys real image very accurately from what they have seen. This invention affected western buildings and garden designs to emphasize the visual effects at most. The scape which is seen from the fixed viewpoint is very much important than other scape. And this phenomenon makes people to be separated from the whole environment (Actually, I think the tendency of the people to be separated from the environment helped the invention of perspective drawing vice versa.) as their standing apart from the objects. And it affected western architecture to be seen more static (easy to be read) not dynamic (difficult to be read).

(4) Different Definitions of Architecture

Though the traditional definition of architecture in East Asian countries is fabrication and adornment in direct, the translated word of architecture and western conception of architecture transmitted to Japan in 1850s' and new word for architecture was introduced in Asian three countries around 1890's by

Japan. There was some conceptual change of architecture from fabrication and adornment of traditional meaning to creation of art work(Lee, 2016). The traditional meaning of architecture in East Asian countries was like making a pot, which totally based on for service of people's needs, corresponding various needs including decoration needs. And then if people's needs won't be changed, buildings in East Asian countries shall not need to be changed. Because the meaning of human being is always as same as the old conception in these countries for a long time, any concepts or premises of human being could not have replaced the human being itself. That is the reason why the same form has been repeated and repeated in these countries timelessly.

But in western countries, best building was considered as a ritual utensil for God. So it has always tried to create a great one beyond human needs. They were trying to put soul in a building to coincide with god's needs. They thought building was not just for human needs but for celebrating human devotion to God which could be interpreted and admitted as a different form of human needs(Rosemary Hill, 2009).

(5) Attitudes of Processing Architecture

East Asian people believed everything existed for human being and it was natural for human being to bask in everything; sunshine, warmth, feast, wind, even coldness, and so on. According to Buddhism, human being can be the final existence beyond the influence of exterior environment. So people believes human being can achieve any value or anything if disciplined with self-realization. Because it is so important to know what human being really is and to realize oneself, other elements are tentatively ignored, and the material world is considered conventionally. By analogy of this, the architectural education in East Asian countries was focused on rather who architects were, what human being should do, and how to become a virtuous person than how to use materials and how to develop techniques to build a building(Ye, 1960)

Bauhaus, as a representative cross section of architectural education in Western countries, tried to educate students to develop new ways of thinking coping with new materials and new technologies at that time (Moholy Nagi, 1947). Western world always had tried to find new world which seemed to be perfect, even they also know what they are trying to do is in the experimental level, but they are trying to do their best for the "zeitgeist" which they think it is right at a time. Then changes and innovations have been happened almost always in western architecture. On the contrary, because East Asian people did not want to be deceived by the temporal material world (according to the notion of Buddhism; Form is emptiness; emptiness is form), they mingled their thoughts with nihilism and they would not have thought the challenge for the new.

5. SOME EXPLICIT DIFFERENT ARCHITECTURAL CHARACTERISTICS BETWEEN THE EAST AND THE WEST

(1) Relationship of Housing to the Public

In the west, each housing unit was naturally accessed directly

from the street which went through the village from the outside. There is no compulsory medium space shared by neighbors between housing units and the street. This phenomenon did happen not only in the narrowly divided housing lots, but also in the case of large block development. In sunny side project(Lee, 1997), a case of large block development, even though they could make other relationships between housing units and the street due to its flexible usage of the land, the entrances of housing units were still along the street in order to link housing units directly accessed from the street. Even though they made a big central garden using the benefit of large block development, it was only a place to take a rest in. They did not allow to make the garden as a medium space between housing units and the street.

While in Korea, housing units were separated from the outside street. They used main street as the main gate to access to the outer world from the village. In a case of a traditional village in Korea, Oeamri(Lee, 1997), the layout which blocked the individual units from the street by one main gate explains two different meanings; one is giving residents privacy from the street business, and the other is blocking the news or information from the outside to them. I think it makes the village people to have one identity controlled by the authority keeping the latent gate.

(2) Conception of Building Frontage

The frontage of a building is generally defined by the position of entrance and the main image of a building. In East Asian countries, the horizontally wide face of a building where entrance is also positioned was considered as a main image. Because it was wide and high, it seized the grand exterior space in front of the building as a part of the building(Kim, 2006). On the contrary, in western countries, they used the side face of a building as a main gate and a main image of the building even it was relatively narrower than the other side. In the west, they allowed people to come into the building not to leave them outside of the building. Because buildings in both area had structural problem that the span of columns could not be arbitrarily expanded, in order to behold many people in a building, in the east, they made an outdoor space correlated with buildings and used it for building purpose, but in the west they increased the space in a longitudinal direction to behold people inside.

I think there might also be engaged issue of finishing the end in a building, in the east, the side ending of building seemed like section of the building because it was wood structure and the wall was just the partition, and north ending and facing south rule was natural. In the west, stone structure allowed it possible for the longitudinal ending of a building to expand to the outside with designing an apse.

(3) Differences of Structure and Materials

The definite different characteristics of the east and the west come from structural materials; in the east, wood structure and in the west, stone structure. This phenomenon is easily explained

as a result of easiness to get materials from surroundings. But the fact that when we see old buildings in northern Europe there were good wood structural buildings tells us there might be other reasons for the western countries to build buildings with stones (Park, 2007). And the fact that in England around 1,000 A.D., there were trend to transform wood buildings into stone buildings also tells us that they used stone buildings to be able to be maintained longer and seemed stronger to express the power. Stone had the meaning of eternity in ancient Europe. In the east, they had a conception that wood was harmonious with nature, and they naturally admitted the fact of wood to be dissolved after some time.

And in wood structure with columns and beams, there is no limitation to fill the wall in between columns, so interior space can be easily open to adjacent rooms and to the outdoor space, followed to get natural environment to the interior space. But because the wall was structure itself in the west, to remove the wall and to make a big size window in a wall were so difficult that the interior space was separated from other rooms and from outdoor space, the nature.

(4) Heating System

In Korea, the floor heating system had been developed so long time, which was originated as a good heating system in cold area like Siberia. In this system, the heat from the fire is going through tunnels installed under the floor, and makes the stone floor warmed. It had made people to live sitting on the floor. In the west they used fire place as a heating system, which is very directly conveying heat to a room through radiating heat of fire and proven to be seen to be heated. They were called standing fire and lying fire by Dr. Kim, Nameung. (Kim, 1994)

6. DISCUSSION

A comparison of architectural conceptions in the East and the West reveals clear differences between the twos and poses the essential question of architecture; what is architecture? Sometimes the characteristic of one area is regarded as a virtuous one under some premises and hypothesis, and sometimes it is regarded more useful than those in the other area. Nowadays western modern architecture style is admitted as the predominant in the world due to the continuously evolved methods of building construction and the enthusiastic movement to create a new architecture based on indefinite human value.

But in order to supplement the one directional way of western architecture which is centered on so called evolving western philosophy, it will be worthy of considering different conceptions of architecture in the east, which is embracing the absolute minute value difference of totality (buildings are not separated from the natural environment and human societal environment, so that buildings should be considered as a part of these whole worlds), eastern humanism (emphasizing communal value and understanding natural human life), and natural ethics (corresponding with the power of nature

and trying to harmonize with it) that were influenced by Confucianism, Taoism, and Buddhism.

While the eastern tradition of architecture had totally collapsed by the new materials and construction methods encroached from the western world in 19th~20th centuries along with the rapid change of modern society in East Asia, developing a new intrinsic approach to architecture for adapting new challenging environments is not only the problem of the east but also that of the west.

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