Research of the Organization System
and the Exchange of Japanese and Korean Technology in Building
“Waegoan”, a Japanese Diplomatic Facility towards Korea

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1. Background

National isolation can be mentioned as one of the characteristic in the modern regional history of eastern Asia. In those periods, East Asian countries had restriction for trading and immigration towards other countries, but on the other hand, they made diplomatic facilities to have cross-cultural relationships. One of the examples is the Tsushima Clan, which was the only place where the Japanese Tokugawa shogunate and the Korean Ri government made negotiations. Choryang Waegoan (1678-1867) was placed in Busan under the jurisdiction of the Tsushima Clan which functioned as a diplomatic establishments and trading house abroad. Choryang Waegoan had a remarkably high internationality compared to other places that were under the jurisdiction of the shogunate in the same period such as the Chinese settlement in Nagasaki or the Dejima. The territory of the isolated settlement of Busan was East Asia’s greatest settlement of approximately 100,000 tsubo (330,600m2) and the continuance of about two hundred years give a different aspect to the foreign affairs in Japan in the Edo period, when they had a strong national seclusion.[fig.1]

2. Purpose of the research and the positioning among previous researches

When the ministry of foreign affairs of the Meiji government condemns Choryang Waegoan, it practically meets an end. Because of the rapid speed of urbanization, what remains now are only parts of the stonewall. This research focuses on the architecture of Choryang Waegoan and aims to illuminate the organization system and the exchange of Japanese and Korean technology towards building
Researches of Choryang Waegoan are achieved in many historical fields such as politics, diplomacy, trading, institution, urbanism, architectures and etc., but in the history of urbanism and architecture, plans and documents that could be evidences for resolving architectural space are not yet clearly defined. Therefore the researches are not further made than the scale of the site and the original outline of the layout and details of architectural space are yet to be verified. In this research, besides decoding and analyzing old documents of the time when Waegoan was built, by comparing architectures of Tsushima in the same period will lead to figuring out the detailed image of Waegoan. Another significance of this research could be mentioned from the fact that the Japanese architecture group had spread both countries’ building technology, which gives a different viewpoint to Japanese and Korean foreign affairs in the modern period.

3. Method of the research

From the purpose of the research mentioned above and by focusing on the document concerning building of the Choryang Waegoan (宗家文庫記録), hereinafter examination of five topics will be made.

1) Decoding and making the digital data of the old document

There are many records of the Choryang Waegoan in both Japan and Korea. Research of the records was done in both countries. Especially, So record, an enormous amount of record made by the Tsushima Clan, was studied carefully and sources concerning Choryang Waegoan’s architectural facts were sorted out. Further more, verifying of diagrams and decoding of documents were done and important parts were digitalized.

2) Sorting the old document by buildings and comparing

Research was done by sorting the decoded old document by buildings and comparing the architectural form from the images of the document.
3) Distilling words concerning architecture

Words that were found from decoding the old documents were distilled, organized, and researched.

4) Organizing and comparing images from the document

the original architectural images of Choryang Waegoan were distilled, organized, sorted into different types by exterior, and then studied with the plans of the architecture.

Construction participant’s specific names that were cleared out according to 1) were analyzed by the Tsushima pictorial data and book of names.

5) Finding and measuring Tsushima’s architecture of the same period

Architectural research was carefully done in Tsushima and buildings that were built around the same period as Choryang Waegoan were measured and then compared and analyzed.

4. Function and size of Choryang Waegoan

4-1. Outline of Choryang Waegoan

In 1678 when the Japanese settlement was built in Busan Korea, in the Yong-dou-mountain Park, the area of the settlement was 100,000 tsubo. Wakan aim to become like the other Japanese settlements that had continued from the middle ages, but Chinryo-Wakan was maintained as Japan and Korea’s diplomatic facility in the modern period and was called Shin- Waegoan (New Waegoan). In the vast site among the Yong-dou-mountain there were Kansyu-ya, Kaaitidejyu (trade center), Saiban-ya, Hamabannsyo, shrines, temples, and Japanese (from Tsushima) settlements.

There were students from abroad to learn medical science and Korean language. Back then Korea was developed in medical science. Many doctors from the Clan and other towns came to learn internal medicine,
surgery, needle therapy, and cauterization. When a Korean language school was built in 1727 in Tsushima Fuchu, students who made a good academic record had a privilege to go to Waegoan and study. It is estimated that there were always 400 to 500 settlers.

4-2. Form of Choryang Waegoan

The site of the Choryang Waegoan was 350ken (636.3m) from east to west and 350ken from south to north, but the southern part has a peninsula sticking out so that it is longer than the north. Therefore the length that we know at present differs in different documents. The area was 10,000 tsubo, the largest in east Asia which is one of the main characteristic of this settlement.

Inside of the Wakan is separated in to east and west by the Yondou-mountain. The east was mainly an economical area and the west was mainly a diplomatic area and around that was stonewalls of 180cm tall.

On the east there were three main buildings, Kansyu-ya, Saiban-ya, Kaiitidejyu, and they were called the three big agency of the east. There were kannsyu, Saiban, Daikan which the Tsushima Clan sent as a work place and houses. There were other building such as To-ko-temple, Tsuji-ya, Daikan-ya, Benzai-ten and by the coast there were the kakoya (水夫屋), metsukeya (目付屋), 「浜番所」, storage, town houses, and a Kiln called the Busan kiln.

The west was mainly a diplomatic area which was set on the west side of the Yondousan (竜頭山) and consisted from nine buildings, “the three big agency” of the west and Rokugyoro (六行廊). Each big agency had two aisles on both left and right side. The site plan was planned by using the grid system. The west building was for the ambassador groups from Japan and each ambassador group entered the three big agency of the west by their posts. Enkyo gate was placed on the north side of the west building and further lead to Korean building called Endaicho. It was planned so that when the Japanese ambassador came, events could take place smoothly.
Fig1. Map of east Asia

Fig2. Choryang Waegoan Plan
5. Repair form of Choryang Waegoan

Because Choryang Waegoan had faced the port, damage by the sea breeze was intense. Moreover, there was a necessity of rebuilding from the factor of a fire etc. too. After it had been set up, Choryang Waegoan maintenance was an acute problem in 200 years for Japan and the Korean two countries. The repair form is divided into "Daikantou" and "Syokantou".

The former: in the one to repair the east pavilion and the west pavilion overall every 25 years. The latter indicates the one to repair the part where rebuilding and the damage of the building burnt down due to a fire etc. are remarkable irregularly. One Doujyouyakukan and Dougeyakukan person generalized, and supervised all processes of construction to "Daikantou". After the demand of the repair enters from the Tsushima side, the government official investigates the damage situation, and the necessity of construction is confirmed. Afterwards, it looks up at the permission of central government. When permission descends, the estimate is sent to central government through Keisyodou-kannei. And, The cost is managed to raise from Keisyodou-kannei, Tonne-fu, central government.

The person whom the construction manager leads from the Tsushima clan related to building makes a passage, construction reports, and completion Doujyouyakukan reports on a breakdown and a total term of works of the cost total to central government again.

This process followed the one that had been established in the Toumo-po Waegoan age before moving to the Choryang Waegoan district. It was engaged to be paid attention here in Choryang Waegoan building and a Japanese and Korean people were engaged in work jointly.

For instance, the human strength of Korea that had been turned on to Choryang Waegoan repair is 37884 person and carpenter rose to 8623 people.
Korean each government office bore the wood and the tile as the material.

Moreover, Korea bore cost according to the repair. The carpenter in the Tsushima clan was do take a passage of 70 carpenters, and undertook the repair And, Okite and Kokite, It was divided into two grades, and the salary was paid respectively. The Japanese was in most this repair and there was a barrier. It is admitted for the construction of a Korean style on the character of repair to have the technology of Japan and to have hit. The generation of the combining style that the style of Korea is made a basic frame here, and the detail of Japan mixes in that each other is suggested.

This form is maintained to Choryang Waegoan deserted building.

6. Organization system in Waegoan repair

When a Waegoan was constructed as mentioned above, the carpenter in Korea and Japan was jointly engaged in work. Then, the carpenter in Japan clarifies how to have been elected. In addition, the take a passage of the engineer of which place is clarified.

As a result, whether the technology exchange at Korea and which level was possible is clarified.

In this text, it refers to the repair in 1749. (Kanei era, Daikantou) [fig.3].

6-1. Decision of Japanese side building participation

When the repair is decided, The construction manager and assistant post are elected from Tsusima clan agency that is first the agency related to Korea in the Tsushima clan. Afterwards it is known by higher officials in the clan. They are called a “Kumigasira”. Submitting the character book (personal history) is obligated, and next, it has Kumigasira recommendation and it is elected though Dougukakakari, Kobiki, the carpenter, and the plasterer are chosen.

At this time, the position is not asked. The construction manager elects more excellent talent from among the candidate several, and the organization of 15
whole numbers has been formed. Of each is notified that the repair participant decides it, and when the position is a tradesman, it is told through the place of the magistrate of the town[Machi-bugyou].

6-2. About the repair participant

15 engineers were sent by Japan through the above-mentioned process. At this time, Magosaburou and Genroku are elected. They are considered from various material.

Did the take a passage of Sabrou as the plasterer. The position is from an old document to the tradesman. Next, Sabrou understands when the Tsushima drawing of a simultaneous period is seen and it is understood to have worked as a carpenter in Tsushima clan Fuchu. Similarly, did the take a passage of Genroku as the sawyer. He died of sickness in Wagoan in December, 1749 in the process. And, similarly, it is understood the tradesman position, and to have resided from the drawing in Fuchu as a carpenter. It is understood that the Japanese side engineer sent when Wagoan is constructed was decided through the selection above.

In addition, the participant understands it was a usual carpenter in Tsushima. This thing is very interesting in the one to suggest the possibility that a Yamato pavilion is made a stage and architectural skills are exchanged at the workman level.
7. Construction of Waegoan and Tsushima at the early modern age

It is guessed that the engineer who was related from the organization form to Choryang Waegoan building was usually acting as a carpenter domestically (in the Tsushima clan). It paid attention to this respect, the order of a Yamato pavilion was pulled out from the old record, the restoration work was done
based on the old document and old drawing, the field survey of construction was done at the early modern age that remained in Tsushima, and the comparison analysis was done.

7-1. Construction of Waegoan

Choryang Waegoan construction is excellent the order and the drawing and remains about the main building. These were digitalized and analyzed. As a result, the entrance (Shikidai) and the veranda (Engawa) in the floor and old samurai residences that were the features of the Japan construction were seen about a three major agency in the east pavilion. In addition, a peculiar name to Japan and construction is used about the room name. For instance, Yarino-ma, Tsugino-ma. A three major agency in the west pavilion was corresponding to the construction of the tradition style of the Korea construction. However, Shikidai is originally distributed to the Korea construction. This thing shows that the element of the Japan construction has mixed each other. [fig.4]

7-2. Construction of Tsushima at the early modern age

A lot of Residences built at the early modern age remain in Tsushima.

Especially, there are a lot of one to take the form of old samurai residences where it provided with Shikidai and Zasiki.

These residences were analyzed by the field survey and it analyzed it of writing making to the drawing and the room composition. As a result, it turned out that the Tsushima construction had a peculiar architectural form common in the clan area at the early modern age. For instance, there is no Doma in a Japanese residences that is the feature, and the space called instead Doji is made.

In addition, there was a space named Daidoco where the board was paved. Moreover, it has high floor amount to 1000milli by externals' not showing the cornerstone from the front, and either using one stone. [fig.5]
7-3. Comparison between Waegoan and Tsushima residence at the early modern age

Waegoann and the Tsushima construction were compared.

As a result, the east pavilion three major agency understands almost the same architectural form as the Tsushima residence in constructing it a Wakan. The style of the Tsushima construction not to show the cornerstone is similar to one piece foundation of the stone where the Korea type is high.

The similarity is not seen in construction and the Tsushima construction of the west pavilion. Architectural having been severely managed by the feudal administration at the early modern age of Tsushima influences this respect.
Fig4. Kansyu-ya restoration
Fig5. Tsushima residence at early modern age
8. Technology exchange in details

Choryang Waegoan was Japan and Korea combining style construction into which the technology of Japan had been taken by the Japanese carpenter based on the construction of the tradition of Korea style.

There was waking up the Korean carpenter and the fight when the Japanese carpenter did not sometimes understand because a basic Korean style, and there was no interpreter in the place. neglecting one's business. However, the problem has occurred in the construction of the bathroom doesn't often understand, and in Korea without for instance at that time for the carpenter in Korea about the east pavilion that is a Japanese house. In this text, the details part that remains in the old record where Japan mixed with the style of Korea each other is concretely described.

8-1. The tile groundwork

It became a big problem between Japan and Korea how to do the tile groundwork. Therefore, it is always included in the special note "Oboegaki" regardless of the scale of construction. According to "Oboegaki", with round small paling in the tile groundwork the 18th first half of century. This is a Korean style. However, there was a problem with an intense leak in the roof in the method. Then, it came to use Sanmai-kake that used the bamboo to usually do from the time in Japan when the 18th century. Is Sanmai-kake conventional construction method of Tsushima, and it remains still in the early modern age of Tsushima residence. [fig.6]

8-2. Tile

In the tile used for Choryang Waegoan, the thing burnt in Korea was a custom. However, differing the style between Japan and Korea became a problem. That is, the pattern and how to burn were different. Then, the take a passage of the tile workman to Choryang Waegoan with the sample from Japan. Technical guidance was done in the kiln place in Korea. [fig.7]
8-3. Tatami

Tatami is a peculiar culture to Japan. It was transported from Tsushima to Choryang Waegoan and it was covered. Bingo-Tatami is a top grade of Tatami. And, it was used for the place that it officially met between Japan and Korea in a Choryang Waegoan. However, the supply is not in time occasionally. Bungo-Tatami was used at such time. Tatami was used also for the west pavilion that was the Korean style construction. The construction of the west pavilion has externals of a Korean style. However, this thing suggests the possibility to be constructed by the industrial method of Japan.

Fig6. Sanmai-kake

Fig7. the pattern of tile in Tsushima
9. Conclusion

Tsushima is a sparsely populated district. The number of person per 60 people mouths has been decreasing during month now. Also on the side of sightseeing, the acknowledgment level in Japan is low.

The theme of this research is a Japan and North Korea cultural exchange at the early modern age. As a result, it has aimed to give a new aspect to the history of the Japan and North exchange. The fact of the take a passage of an architectural engineer in Japan at the early modern age when the isolation historical view is strong is interesting. In addition, the Tsushima residence can be caught as an important cultural heritage by the thing proven to be a spread of an architectural culture at that time by the exchange of the engineer of the two countries. The demolition has came one after another from the limit at the decline in population and the service life to the Tsushima residence at the early modern age now. It will investigate immediately in the future, and the relation to an architectural culture of Korea is clarified and it exists in the proposal of an international cultural heritage that exceeds the frame in Japan and Korea as a final target.

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