Realization of Vertical Light for Le Corbusier's "Synthesis of the Arts" in the National Museum of Western Art in Tokyo

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Abstract
This study aims to clarify the design method exemplified in a prototype by Le Corbusier, analyzing the second realization of the "Museum of Unlimited Growth" in Tokyo, Japan (1955–1959). According to the analysis of Le Corbusier Plans, Carnets (Sketchbooks), and documents of Le Corbusier's correspondence, the author categorizes the process of the spatial transformation of the prototype in four parts. A finding from this analysis is Le Corbusier's fundamental interest in natural light over spatial extension based on the pyramidal top light system in the grand hall, which features the "photographic wall" in the center of the museum. In conclusion, this paper points out that the museum in Tokyo reflects the origins of the museum prototype; it is the place for synthesis of the arts illuminated by natural light.

Keywords: Le Corbusier; museum; prototype; Tokyo; light

1. Introduction

After realization of the "Museum of Unlimited Growth" as the prototype for anyplace in Ahmedabad, India (1957), Le Corbusier obtained the opportunity to construct the next museum (Fig.1.).

The decision to restore the Kojiro Matsukata collections left in France for Japan created the need to construct a museum to house about 300 Impressionist art works and 60 sculptures from the 19th and 20th centuries. The "Conference for the preparation of the French museum" in December 1953 was held to discuss a suitable construction site and an architect. Ultimately, Le Corbusier was chosen as the architect to construct the museum at Ueno. However, the framework for this project was not wholly ideal for Le Corbusier. He demanded a space appropriate for specific art works of a particular period. Such a museum was far from Le Corbusier's idea of the "Museum of Unlimited Growth," which could cover the entire history of manmade objects.

Nevertheless, the Japanese architect Kunio Maekawa, a colleague from Atelier Le Corbusier, specifically requested that Le Corbusier head up this project. He received this response to his request:

"Dear Maekawa,
I've received your letter of April 14 1954, which demands that I establish plans for a museum in Tokyo to house the Matsukata Collection. I accept your request with pleasure because the problem of modern museums is one of the problems in which I am most interested. I would like to settle the financial problem from the start (it's a delicate matter). About works in foreign countries, I cannot start until the total amount of the fee is paid as I have had too much difficulty and surprising displeasure before.

I clarify my activity about this affair: I will make a master plan, correct it, and put the final plans to the Japanese architects for realizing them in Tokyo. I cannot take part in the realization. You have your engineers in Tokyo, your regulations, and your architects who are able to realize perfectly all the things required for the site.

In reality, it is no more than a small problem. I would like to say that this problem was repeated in other projects, for example, the grand hotel about which you talked to me."

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Of course, I will visit Tokyo once to understand the place and the measurements for construction. Although I am not making a firm promise here, I will try to make a return trip (see the financial requirements for this trip in my annex proposal).

I would like to give you the annex proposal stating the financial conditions concerning my participation.

To dear Maekawa and all the friends of Tokyo.

Sincerely yours.”

After acceptance of the project, Le Corbusier officially signed the contract with Japan’s Minister of Education, and he visited the construction site in Japan during the period October 2–9, 1955. Prior to this time, he had not studied museum projects in Tokyo. He had no choice other than to adapt the "Museum of Unlimited Growth" as a prototype. It incorporated the possibility of the spiral and the fylfot as extensions and increased the cubic volume based on the use of pilotis with natural top lighting devices. However, the realization of the museum was not the compulsion behind the ideal prototype. Le Corbusier at least desired to visit the site to study the external conditions and their suitability for the museum prototype. If his plans were only to establish a replica of the prototype, he would not have needed to visit the construction site.

With the visit in Tokyo as a turning point, the "Museum of Unlimited Growth" was developing differently than the one in Ahmedabad (Sendai, 2015). Therefore, an aim of this paper is to clarify the design
method used by Le Corbusier in developing the art space for the second realization of the "Museum of Unlimited Growth" in Tokyo.

Previous research on Le Corbusier's museum designs discuss the historical value of these works (McClellan, 2008; Jodidio et al., 2010), basic investigations employed for management of the museum in Tokyo (Ishitobi et al., 2010), or analyses of the museum's top light system (Doumyou et al., 2009). To the best of the author's knowledge, no research has yet been carried out to discuss the transformation (and its underlying causes) of the spatial composition of a museum in view of the prototype (Sendai, 2012, 2015).

According to an analysis of the _Oeuvres complètes_ Le Corbusier Plans (304 plans),_10_ Carnets (Sketchbooks),_11_ and Le Corbusier's correspondence preserved at the Le Corbusier Foundation,_12_ the author categorizes the transformation of the site plan into four parts (Fig.2.).

2. Creative Process for the Museum in Tokyo
2.1 First Project (November 3, 1955–May 29, 1956)

The construction site for the museum was established in Ueno Park in Tokyo, where diverse cultural facilities exist; it provides a panorama of the center of the city. The conditions in Tokyo differed from those in Ahmedabad; the climate in Tokyo was as severe as that in Ahmedabad, but the site scale was smaller.

On November 3, 1955, at the first investigation of the site, Le Corbusier recorded in detail the climate conditions and the direction of the wind in his "sketchbook," as well as scenes surrounding the site. At the same time, he studied the site composition along with several architectural volumes. His work in Tokyo involved adaptations of his prototypes for the "Museum of Unlimited Growth," the "Miracle Box" (theater), and the "Pavilion" (Fig.3.)._13_ This is a complex art space designed to meet the needs of the client.

On the other hand, Le Corbusier was faithful to the context of the Ueno district. After returning to Paris, he studied circulation to relate the existing cultural facilities (National Science Museum, Tokyo National Museum, etc.)_15_ to the arrangement of the prototype on the basis of the general plans for Ueno Park sent to him by the Japanese architect Junzo Sakakura, a former colleague at Atelier Le Corbusier.

More concrete studies by Le Corbusier began in 1956. The construction site is composed of two axes: the south-north axis connects the museum and the pavilion, and the intersecting east-west axis connects the main entrance of the site and the Miracle Box. Later, the intersection of these two axes would be named the "esplanade."_16_ It is certain that the configuration of the two axes was similar to that for the new capital city of Chandigarh, also planned by Le Corbusier. However, existing trees were respected the most._17_

To display the Matsukata Collection, the exhibition floor of the museum prototype was divided into three sections: the permanent exhibition, temporary exhibition, and the document stand._18_ The circulation system for the spiral and fylfot was designed for this exhibition floor._19_ The center space on the ground floor was designed like a well and called the "grand hall." Further, it incorporates balconies._20_ In Tokyo, this was not only the introduction of an exhibition on an upper floor, but also a unique inclusion of the hall itself as a part of the space for the exhibition, known as a synthesis of the arts._21_ The grand hall would also be called the "core of the epoch of harmony" or the "19th century hall."_22_

After completing the fundamental studies, Le Corbusier sketched bird's-eye views of the site (Fig.4.). He followed the previous composition of the museum raised up by pilotis with the pavilion and its parasol-like roof and the "Miracle Box" sporting a geometrical form.

Fig.3. One of the First Sketches of the Museum Site by Le Corbusier (November 3, 1955)_13_

Fig.4. Vision of the Site by Le Corbusier (March 13, 1956)_21_

Fig.5. Vision of the "Grand Hall" by Le Corbusier (March 7, 1956)_24_
Although the natural top light device (roof) corresponds to the spiral circulation on the exhibition floor, the pure rectangular profile of its volume is closed and we cannot recognize the concept of the spiral extension of the museum from Le Corbusier's sketch. The cubic volume of the lecture hall and library in the west and the terrace in the south should suggest partly the fylfot extensions.

On the other hand, Le Corbusier sketched the interior perspective of the grand hall, which shows the ceiling with many small openings called "claustra" (Fig.5.). The red color of the ceiling; the yellow, green, or blue color of the walls, and the murals (paintings) cause the south wall to resemble the Chapel of Ronchamp (1953) instead of the museum courtyard in Ahmedabad (1957).

Furthermore, the transformation of the museum prototype was accelerated to match the functional condition and the geometrical limits of the site; it was impossible to adjust the spiral and fylfot extension to precisely achieve the ideal for the site. The extended measurements of the museum would overflow the actual site. Therefore, the future construction area encompassing land from the north side to the west side for extension was reduced.26 Similarly, the narrow site did not allow for construction of the four fylfots at the volumes designated. Therefore, annex functions were inserted for the space on the grand floor: the office and the stock room were placed in the northern part of the museum, and the restaurant proceeds from the eastern part of the museum.27 As a result, the image of a museum elevated in the air broke down (Fig.6.).

In addition to studies of the plans, Le Corbusier examined the combination of natural top lighting and artificial lighting (Fig.6.).28 Natural light pours in from both sides of the lighting device on the exhibition floor. This lighting system cannot control sunlight’s movement; therefore, it is very different from the homogenous lighting employed to preserve exhibits in modern museums.29 However, for Le Corbusier, the principle of 24-hour sunlight was a matter of the highest priority. He did not regard problems occurring from direct sunlight on the exhibition floor as paramount, in spite of a solar lighting failure in the museum in Ahmedabad (1957) (Sendai, 2015).

2.2 Second Project (May 29, 1956–July 9, 1956)

Le Corbusier shifted his studies to the exhibition space because the collection for the museum in Tokyo was more definite than for the museum at Ahmedabad.

The grand hall was the first object of the fundamental revision: the east slope in the grand hall was moved to the north side (Fig.7.). Thus, visitors would definitely view the mural paintings upon entering the grand hall (instead of the slope) (Fig.5.).

Corresponding to this spatial modification of the grand hall, Le Corbusier restudied the lighting device in the grand hall: the claustra ceiling with a diffused lighting effect replaced the pyramid-type device placed at the intersection of the pillar and the beam to express the symbolic verticality of the well of the grand hall (Fig.8.).

Le Corbusier reexamined also the natural lighting system that illuminated art works on the exhibition floor. In contrast with the vertical light effect in the grand hall, the lighting system on the exhibition floor brought in diffused light from two directions: the cross-sectional shape (U-type) and that resulting from the function of drain and ventilation (V-type).30

Zoning on the exhibition floor was simplified with a division into two sections: the permanent exhibition containing the Matsukata Collection and the temporary...
exhibition area. However, this modified zoning by Le Corbusier provoked cutting the spiral circulation for the exhibition.\textsuperscript{36} It did not take long for Le Corbusier to perceive the problem, and the exhibition floor in the museum was redivided to create three sections that flowed with a natural spiral effect from the permanent exhibition to the temporary exhibition and document stand.

After these preliminary studies, a series of plans was prepared, along with several partial studies; they were submitted to Japan on July 9, 1956.

However, the general plans contained a new concept that had not been studied before: a flower bed. The flower bed on the roof would resemble Le Corbusier's "roof garden," even if positive use of the space was not investigated.\textsuperscript{37}

\subsection*{2.3 Third Project (December 6–May 2, 1957)}

A series of general plans sent to Japan was reproduced according to the technical viewpoint of construction advocated by the office of Junzo Sakakura.\textsuperscript{38}

However, the Ministry of Education pointed out that Le Corbusier's general plans sharply exceeded the budget. Therefore, the Ministry proposed abandoning plans for the annex library and museum foyer. Additionally, simplification in terms of finishing the pending exterior development and incorporating Le Corbusier's proposition regarding a direct natural lighting system were encouraged.\textsuperscript{39} It is certain that a perfect, constant lighting condition is impossible with the natural lighting device that opens from two directions (Le Corbusier's idea). The concept of 24 hours of sunlight was not suitable for the homogeneity of the modern art space.

After detailed studies by Japanese architects and the reexamination by Atelier Le Corbusier, a series of plans was sent to Japan on March 26, 1957.\textsuperscript{42} Reflecting the demands of the Ministry of Education, the foyer was deleted. A second series of plans without the site plan suggests that Le Corbusier might also have abandoned the pavilion, Miracle Box, and restaurant. However, the cubic volume of the lecture hall "to construct later" was still included in the plans.\textsuperscript{43} On the other hand, revised roof plans without the flower beds indicate that the concept of the roof garden was also abandoned.\textsuperscript{44}

![Fig.9. Lighting System for the Exhibition Floor (February 1, 1957)](image)

In response to these demands, Le Corbusier reexamined the natural lighting system on the exhibition floor beginning in early 1957 Fig.9.). Although he had abandoned a natural lighting device in Ahmedabad, he clung to the principle of his own natural lighting system adding more support to the artificial lighting device. In other words, Le Corbusier chose the condition of natural light at the cost of the functionality of the modern art space.\textsuperscript{41}

In May of the same year, the glass wall on the grand floor was also studied. The lower part of the floating museum, which was supported by the pilotis, was covered with a glass wall—\textit{pans de verre ondulatoires} (undulating glass wall by irregular mullions).\textsuperscript{47} The wall was designed only for its optical effect; it served no particular function to establish a formal monumentality by camouflaging the massive image of the lower part.

\subsection*{2.4 Fourth Project (September 9, 1958–February 21, 1959)}

Japanese architects continued to carry out construction of the museum, checking with Le Corbusier on selection of materials, finishes, and details. In this process, Le Corbusier recognized the determination of the Japanese architects; for example, a breakdown in application of his measurement system—the "Modulor"—occurred because of the change in pillar diameter based on structural dynamics.
Moreover, the determination of the height of the pyramid as a top light device, and the new installation of a chimney were also entrusted to the Japanese.\textsuperscript{48} After seeing the photographs of the museum realized by the Japanese architects, Le Corbusier wrote as follows:

"According to the photograph of the documents which I have received, it seems that the execution of the Museum is perfect and I respect your personal capacity (three of you), and also the Japanese integrity without compromise. It is one of the essential factors of the Japanese soul, which I had known in my youth through works of stamps, prints, etc. I'm very happy to have realized it with your aid. If time remains, I'm also happy to make the mural photograph of the Grand Hall of the XIX century, which will be a work to revitalize [the memory of] this astonishing century.\textsuperscript{49}"

However, his letter was not only for praise. It demonstrates his continued interest after the final plans established in Atelier Le Corbusier shifted to the "photograph wall" in the interior space of the grand hall\textsuperscript{50}.

The practical study of the photograph wall began in September 1958 after the cornerstone ceremony was held on March 21, 1958. At first, Le Corbusier studied the basic color composition, drawing the curved outline associated with the composition of his pictures and tapestries.\textsuperscript{52} The ceiling under the natural lighting device (pyramid type) was a vivid red (Fig.11.). It was similar to the ceiling with claustra in terms of accelerating one’s gaze toward the colored ceiling (Fig.5.). Le Corbusier referred to this photograph wall in the grand hall as the Sistine Chapel.\textsuperscript{53} His vision of the grand hall never faded. He continued to hope for the chance to realize its completion. Therefore, although he had visited Japan once, he hoped to return.\textsuperscript{54}

3. Conclusion (Fig.12.)

In the National Museum of Western Art in Tokyo, natural lighting illuminating the exhibition floor—not realized in Ahmedabad—was barely achieved. The center of the museum has become the grand hall with a pyramid-type lighting device that emphasizes the verticality of light and the theme of the "Museum of Unlimited Growth." However, the envisioned spiral and fylfot extensions were sacrificed along the way.

First, a museum to house the "limited" Matsukata Collection and a museum for unlimited growth were concepts that conflicted with each other. Le Corbusier's research on museums in Tokyo took him back to the origin of unlimited growth, which is portrayed in the center part of the museum. Here, light itself is symbolic. The grand hall of the National Museum of Western Art is the fundamental question about the relationship between the art work and its lighting as the pre-prototype of "Museum".

Construction of the grand hall of the National Museum of Western Art was a fundamental concern with regard to the art works to be featured "under the light."\textsuperscript{55} The grand hall must also be a place for synthesis of the arts and fundamental dialogue between art, architecture, pictures, and sculptures. Le Corbusier persistently pursued the vision for synthesis of the arts following World War II, when he came across the project of constructing a museum in Tokyo. He maintained his focus, and the museum was realized.

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2) Gargiani, R. and Rosellini, A., tr., Piccolo, S. (2011) Le Corbusier, Béton Brut and Ineffable Space, 1940-1965. Lausanne: EPFL Press.

3) Ishitobi, S., Okazaki, K., Kumagai, R., and Yamana, Y. (2010) A study on change in Modulor size applied to the main building of the National Museum of Western Art—Through a comparison between design for execution and present, Summaries of Technical Papers of Annual Meeting, Architectural Institute of Japan, pp.875-876.

4) Jodidio P., Le Bon, L., and Lemonier, A. (2010) Chefs-d’œuvre? Architectures de musées 1937-2014. sl: Éditions du Centre Pompidou-Metz.
Notes

1 AFLC, L3-15-119; AFLC, L3-15-121.
2 cf., Yuzo Taruki (ed.), Situation of the Foundation of the National Museum for Western Art, vol. 3, Association of the National Museum for Western Art, 1989.
3 He refers to the Imperial Hotel in Tokyo (1923) by Frank Lloyd Wright.
4 AFLC, F1-12-5, letter from Le Corbusier to Kunio Maekawa, May 10, 1954.
5 This contract established plans for electric and water equipment as Le Corbusier's task (cf., Taruki [ed.], op. cit., vol. 3, pp.209-214). However, Le Corbusier did not implement them.
6 Le Corbusier visited the site October 3-4 & 9, 1955, at least. However, the exact dates of his visit to the site are not certain.
7 Created by the author. The overlap or the blank for each period depends on plans conserved by the Le Corbusier Foundation.
8 Particularly in Tokyo and in addition to climate-related issues, the art works to be preserved posed problems. Le Corbusier demanded an assurance of the extension of the museum before his visit to Tokyo (cf., F1-12-16 letter from Le Corbusier to M. l’Ambassadeur du Japon, June 13, 1955), but the Matsukata Collection is very limited and representative of only a certain period.
9 Le Corbusier et son atelier rue de Sèvres 35, in W. Boesiger (ed.), Œuvre complète 1952-1957, Les Éditions d’Architecture, Artemis, Zurich, 1957, pp.168-173; Le Corbusier et son atelier rue de Sèvres 35, in W. Boesiger (ed.), Œuvre complète 1957-1965, Les Éditions d’Architecture, Artemis, Zurich, 1965, pp.182-191.
10 Le Corbusier, Le Corbusier Plans, DVD Volume 14, Echelle-1, Tokyo, 2006.
11 Le Corbusier, Le Corbusier Carnets, vol. 3-4, Éditions Herscher/Dessain et Toila, Paris, 1981-1982.
12 AFLC, F1-12, F1-13, L3-15, Foundation Le Corbusier.
13 Le Corbusier, FLC29958, November 3, 1955.
14 The "Spontaneous Theater" for traditional folklore at the cultural center in Ahmedabad was not adapted. On the other hand, Le Corbusier proposed the "Pavilion," which was not conceived at Ahmedabad.
15 cf., Sakakura, Le Corbusier, FLC34014A, November 9, 1955; Sakakura, Le Corbusier, FLC34008A, November 19, 1955.
16 cf., Le Corbusier, FLC29973H, January 6, 1956; [Le Corbusier], FLC24650 "Espalanade" is not "open space" or a "plaza"—it refers to the promenade in the site.
17 cf., [Yoshizaka], FLC34048B, November 28, 1955; Taka, FLC24735, November 28, 1955; Maisonnier, [Le Corbusier], FLC24649, January 1956.
18 cf., [Le Corbusier], FLC24719A.
19 cf., [Le Corbusier], FLC29939C.
20 The composition of a well and balconies is of the same type as the entrance hall of the Villa La Roche-Jeanneret (1923).
21 cf., Maisonnier, FLC24640, March 7, 1956. In March 1956, the concept of displaying art works of various genres, such as pictures, sculptures (of Rodin), furniture, and mural paintings, in the "grand hall" was already conceived by Le Corbusier. Originally, the center of a museum was the "first room" for the exhibition filled with a homogeneous light (cf., Le Corbusier and Pierre Jeanneret, in W. Boesiger (ed.), Œuvre complète 1929-1934, Les Éditions d’Architecture, Artemis, Zurich, 1964, p. 72).
22 "The installation of the Matsukata Collection in the National Museum for Western Art is the final result to manifest most of the 19th century (period of Impressionism) and the early 20th century, which leads us to the next epoch of machine civilization: an epoch of harmony. This is why the core of the National Museum for Western Art is formed by the Grand Hall of the 19th century. This Hall occupies the three levels, from the ground floor to the top roof. A slopel allows [one] to go up slowly toward the Gallery floor and the mezzanine balcony. This Hall and Gallery floor are connected by the lobbies." (AFLC, F1-12-174, note from M. le Corbusier au Ministre de l’Éducation Nationale, July 6, 1956).
23 Le Corbusier, FLC29959, March 13, 1956.
24 Le Corbusier, FLC29936C, March 7, 1956, published in Le Corbusier et son atelier rue de Sèvres 35, Œuvre complète 1952-1957, op. cit., p. 172.
25 The "claustra" was the first idea for lighting. The study of the pyramid device began in May 1956 after the claustra concept was abandoned. In the project of the museum in Ahmedabad (1957), the claustra was adapted for the upper part of the façades (cf., Olek, FLC6952, November 9, 1952; Olek, FLC6951, November 9, 1952).
26 cf., [Maisonnier], FLC24670, March 9, 1956; Maisonnier, FLC24636, April 24, 1956.
27 cf., [Le Corbusier], FLC24661; [Le Corbusier], FLC24660; FLC24680; [Le Corbusier], FLC24719C.
28 [Le Corbusier], FLC24647, 1956.4.4. cf., Maisonnier, FLC24669, April 23, 1956.
29 cf., [Le Corbusier], FLC29939F. About the first studies on the natural lighting in Tokyo, cf., [Le Corbusier], FLC29939F; Le Corbusier, FLC24701, May 14, 1956. About the combination with the artificial lighting, cf., Maisonnier, FLC24672, February 1, 1956, mod. May 7, 1956; FLC24699; [Maisonnier], FLC24637, May 14, 1956; FLC24707. The artificial lighting was for the display of solid works such as sculptures. However, the wall display by Le Corbusier's "Modulor" measurement was a more important matter.
30 In the Contempory Art Center (1936), Le Corbusier tends to control sunlight to "distribute rational light" via the glass ceiling. cf., Le Corbusier and Jeanneret, in Max Bill (ed.), Œuvre complète 1934-1938, Les Éditions d’Architecture, Artemis, Zurich, 1964, pp.153, 155.
31 cf., [Le Corbusier], FLC24717. About the reexamination of the circulation, accompanying the replacement of the slope, cf., [Maisonnier], FLC24696.
32 In the museum in Ahmedabad (1957) and the museum in Chandigarh (1964), the position of the slope in the center hall was modified as well. In the case of Ahmedabad, the reason for the modification was the change in location of the museum itself; in Chandigarh, it concerned abandonment of the front pond. However, it is difficult to point out the evident reason for the change in position of the slope in Tokyo.
Ironically, the flower beds were realized, and the corresponding plans were also examined (cf., Le Corbusier, FLC24679; Le Corbusier, FLC24711, May 29, 1956; Le Corbusier, FLC24678; FLC24662).

However, the plans made by Sakakura were not perfect replicas of Le Corbusier’s plans. The domestic laws and regulations in Japan brought modifications: the pillar section of the pilotes was established as 630 mm instead of 530 mm because of structural mechanics; the aluminum coating of ceiling lighting on the exhibition level was changed to sturdy concrete because of corrosion, etc.

By the way, the architectural team of Japanese architects included Kunio Maekawa, Junzo Sakakura, and Takamasa Yoshizaka, who were colleagues at Atelier Le Corbusier. Their roles are as follows: structure and equipment (Maekawa), design details (Sakakura), and contact with Le Corbusier (Yoshizaka).

“Demand of modification from the Minister of Education to Le Corbusier,” Taruki (ed.), op. cit., vol. 1, p. 218. However, the completed building in Tokyo depends mostly on artificial devices (Ibid., p. 218).

About the published plans, cf., Le Corbusier et son atelier rue de Sèvres 35, W. Boesiger éd., Œuvre complète 1957-1965, Les Éditions d’Architecture, Artemis, Zurich, 1965, p.186; cf., Le Corbusier, FLC24618B, March 26, 1957; Le Corbusier, FLC24619A, March 26, 1957; Le Corbusier, FLC24621A, March 26, 1957; Le Corbusier, FLC24622A, March 26, 1957. According to Fujiki, Le Corbusier aspires to realize a roof garden, setting aside the question regarding its function (Taruki [ed.], op. cit., vol. 1, pp.219-220).

cf., Le Corbusier, FLC24618B, March 26, 1957.

Ironically, the flower beds were realized, and the corresponding photos and plans were published (cf., Le Corbusier et son atelier rue de Sèvres 35, Œuvre complète 1957-1965, op. cit., p. 186). For Fujiki, realization of the flower beds was important (cf., Taruki [ed.], op. cit., vol. 1, pp.219-220). The concept seemed to be a special consideration of Le Corbusier’s for the Japanese.

[Le Corbusier], FLC29948B; cf., Le Corbusier, FLC24623, March 26, 1957; Le Corbusier, FLC24624, March 26, 1957.

ex., Maisonnier, FLC24631, February 12, 1957. Until this time, Japanese architects studied the details of the outer wall on their own terms (cf., Sakakura, FLC24733 [December 6, 1956]). According to Fujiki, Le Corbusier proposed the concrete panel filled with stones for the outer wall; ultimately, he chose stone material from Japan’s Tosa region after studying samples presented by Yoshizaka (cf., Taruki [ed.], op. cit., vol. 1, p.213).

About the studies on the effect of wave motion associated with the glass wall, the optical illusion is attributed to the arrangement of Mullion, cf., [Le Corbusier], FLC29970; [Le Corbusier], FLC29971; FLC29968; FLC29969; Le Corbusier, FLC24628, May 2, 1957; Le Corbusier, FLC24629, May 2, 1957.

The plans established by Kunio Maekawa in 1957 were loyal to those by Le Corbusier. However, the boiler house, chimney at the ground floor level, and flower beds on the roof were added in the elevation plans. Probably, Le Corbusier recognized orally this determination by Sakakura.

Certainly, Le Corbusier adopted various ideas from his colleagues and translated them uniquely. Even without his modifications, the autograph (signature) of “Le Corbusier” guarantees a work as his. In Ahmedabad and Chandigarh, Le Corbusier accepted the Indian ideas visually. Even if Japanese architects had experience working in Atelier Le Corbusier, his complete consignment was extraordinary.

Le Corbusier trusted the Japanese architects implicitly based on their former status with Atelier Le Corbusier: “I add that the realization of [the] site will be done in an excellent condition by the Japanese architects, who have worked for [a] very long time in my office and understand exactly my ideas, my requests” (AFLC, F1-12-10, letter from Le Corbusier to Tamura [Chef de la Chancellerie, Ambassade du Japon], September 9, 1954)

AFLC, F1-13-41, letter from Le Corbusier to Junzo Sakakura, September 7, 1959.

Le Corbusier announced to Japanese clients that the “photograph wall” (collage of photographs on the surface of a wall) had success at the Swiss Pavilion (1931) and the Pavillon des Temps Nouveaux (1937) (AFLC, F1-13-20, letter from Le Corbusier to Kunio Maekawa, Junzo Sakakura, and Takamasa Yoshizaka, January 26, 1959).

Le Corbusier, FLC33443, February 12, 1959. About its rough sketches, cf., Maisonnier, [Le Corbusier], FLC29967, February 5, 1959; Maisonnier, FLC24648, February 5, 1959; Maisonnier, FLC29962, February 5, 1959.

cf., [Yoshizaka], [Le Corbusier], FLC29953, September 9, 1958, September 15, 1958; [February 21, 1959]; Yoshizaka, Le Corbusier, FLC29952, September 9, 1958, September 15, 1958, February 21, 1959; FLC29965, February 9, 1959; Yoshizaka, Fujiki, FLC29961, February 9, 1958; FLC29964, February 9, 1959; FLC24644, February 9, 1959; FLC24645, February 9, 1959. We can see the same composition in the photo collage of the Pavillon des Temps Nouveaux (1937), which represents the history of urbanism in Paris (cf., Le Corbusier and Pierre Jeanneret, in Max Bill [éd.], Œuvre complète 1934-1938, Les Éditions d’Architecture, Artemis, Zurich, 1964, pp.165-166).

“This photograph wall is not children’s play. It is a capital thing. This occupies 500 square meters. Suppose a Sistine with the photograph in place of brush! The composition deprives the aesthetic preoccupation; it’s simply to enlighten the problem of material!” (F1-13-39 Letter from Le Corbusier to Takamasa Yoshizaka, March 3, 1959).

cf., AFLC, F1-13-39 Letter from Le Corbusier to Takamasa Yoshizaka, March 3, 1959; F1-13-42, note from Le Corbusier to Sakakura, May 22, 1962. The photograph wall was not realized. Ironically, according to Fujiki, the clients estimated that the direct sunlight at the top would damage the paper on the photograph wall (Taruki [ed.], op. cit., vol. 1, p.220).

AFLC, L3-15-131.

cf., Le Corbusier-Saugier, Vers une architecture, G. Crès et Cie, Paris, 1923, p.16.