

# REREADING AND ANALYZING OF A CHINESE INTRINSIC STYLE

## History and Theory of Chinese Urban Modern Architecture

Zheng Yue

Faculty of Architectural, Civil Engineering And Environment, Ningbo University

Senior architecture student, Ningbo, Zhejiang, China

zjhzy2010@163.com

**Keywords:** the Great Shanghai Plan, comparisons, fusion, prototype, construction system

### Abstract.

Chinese modern architecture was the most popular style in the period of 1930s influenced by the style of Beaux-Arts of architects, Chinese Palace style architecture. Here we talk about the traditional inheritance of the Shanghai Special Municipal Government Building and the comparisons between the western-influenced style architecture in the same period in the 1930s.

### [1] The Great Shanghai Urban Plan

#### 1 History of the Great Shanghai Plan

Looking back to the 1840s, after Shanghai opened the port in 1843, the citizens in Shanghai were keeping the lead status in developing and reviving city construction. Those majestic constructions made the small anonymous city along the river turn out to be one of the well-known international cities in the world.

However, the process of the city developing was filled with the brands of the western force. Its boom, symbolized as the concession, was actually motivated by the European countries. Saying likes "All rivers run into sea" seems inspirational but helpless.

In order to improve the deformed situations, Shanghai created the first comprehensive urban development and planning---the Great Shanghai Plan.

In 1929, the Nanjing temporary national government had been set up just for two years, and decided to stand up in Shanghai. In August, the mayor Zhang Qun finally drove the Shanghai municipal construction design downtown area. However, exactly, what they called "downtown" at that time is not in the same concept like today, it regardless of concession, only the Chinese residential area is dealing as "Downtown". Until 1929, as the establishment of the <Plan of construction of center area in Shanghai>, they had the specific introduction of the city center. Soon later, the <Plan of the Huangpu Zhajiang River> as well as the



<Shanghai Zoning Plan > were republished to carry on the city construction including the city hall under the overall office building, city stadium, city library, museum of the city, city hospital, city parks and the national Music Professional School.

## **2 Content of the Great Shanghai Plan**



Through long time deepening, the constructors formed a set of urban construction plan----"The great plan in Shanghai" as its name suggested, the city government officials' main idea was to build grand city, which was large and modern on the structure and function in order to make Shanghai into eastern great port.

The master plan and aerial view clearly showed the effort and expectations that the big Shanghai plan prepared to radically change the structure of Shanghai city. Downtown area with strong axis and the rigorous composition cooperated with the orderly and slightly loose, organic form of concession, and it constructed the big Shanghai dual core model of urban structure. It was not hard to see these limitations on concessions driving the transfer of capital to the urban area and population, and it is also the important intentions of the big Shanghai plan.

## **3. Heritage of the Great Shanghai Plan**

Until now, the formal paper of the great Shanghai plan still had not been found, and probably had not finished. However, according to the draft content and part of the finished plan, we could find that it was like a necklace to link the modern Shanghai urban planning with construction activities and put them into integration.

While, after the incident has been called "Jan. 28th Incident" in 1932, the heavy rebuilding work of the city run out of the wealth of the government. Even more seriously, in 1937, Chinese and Japanese broke out the defense war. This great plan had to be abandoned. A built building was ruined in the gunfire. But we can still obtain much information from the relic.

## **[2]Cases Analysis**

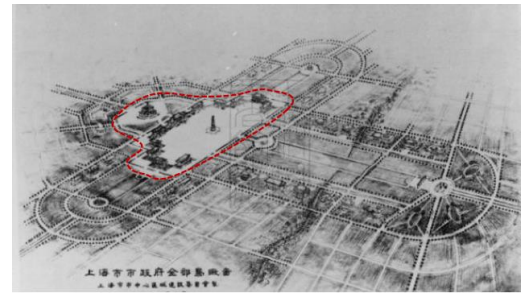
### **1. The Background and Plan of the Building Construction**

In the great Shanghai plan, the administrative region (about 1000 mu) located in the central area was the place for the city authorities' power. In order to build a good city government building, the government confirmed the three original design Architectural style as the following: firstly, the building must be the Chinese traditional style called "Big Roof" architecture, but with modern equipment; Secondly, the plane layout should make the city government and the affiliated agencies detached set; Thirdly, the branches of the government was built around the city, and in different periods for installment construction. The Shanghai Special Municipal Government Building was regarded as the leader of all of the public buildings in "the great Shanghai plan". Standing out from eleven building factories architect Dong Dayou won the bid for the masons.

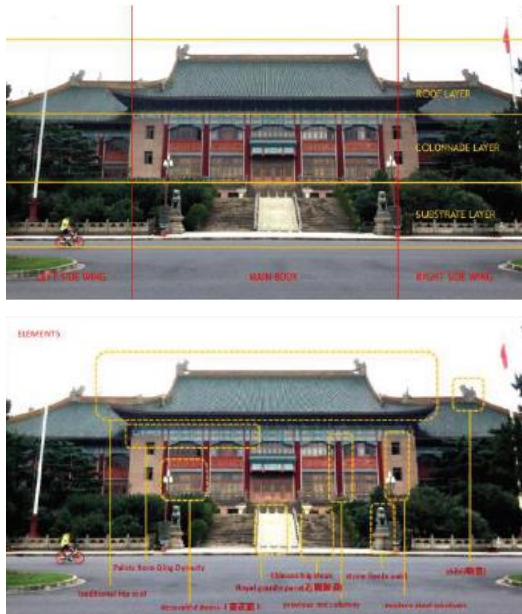
### **2. The Overall Building Group Arrangement**

The central Government building is nowadays located in Shanghai University of Sports. Several main public buildings are surrounding the central square which creates a central axis that goes through the Shanghai Special Municipal Government Building. In front of the building, it is a town square containing one hundred thousand people, in the center of the square, there is a monument placed to reinforce the power of the Nanjing central government as well as the importance of the

central axis. Back of the building was another square where the bronze statue of Sun Ya-sen. And the Shanghai Special Municipal Government Building was standing on the leader position of all the building groups. Obviously, the aim was to show leadership and authority of the government with this kind of master plan arrangement.



**3. Style and Facade**



Building model uses the relation of three layers for the whole composition, the rooflayer, colonnade layer and the substrate layer. The first layer of the building is made up with the stylobate, surrounded by railing, the central part set wide steps, lined with stone lions guard. From both sides of the steps, going through directly to the hall on the second floor, the steps of the middle is a rectangular piece of relief, the images seemingly become heyday pictures. From its appearance, it based on Chinese ancient buildings: the huge eaves with huge roof, colored glaze and green tiles, beams, columns and brackets, it is full of ancient Chinese palace architecture magnificent atmosphere. Meanwhile, it also brought some scientific rational spirit into the construction field,

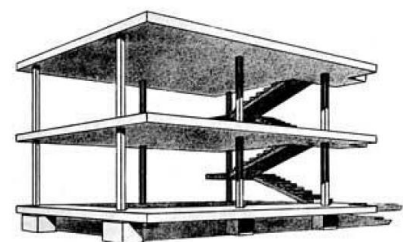
paying more attention to function, so that there was a combination of classical culture and the spirit of the age, therefore, it can be said to be the typical neoclassical architecture in China.

From the facade, we can see the element relate in shape to those in Qing dynasty's mansion buildings. From the traditional roof, previous red columns, long stone steps, weaving wood of the windows, we can see the features. However, the Chinese hipped roof and corbel bracket lose its ability to support although they maintain their shape and form. Thus, the roofs' angle and the scale of the brackets were really different from the ones before.

**5. Structure, Materials and Devices**

**Structure**

The Shanghai Special Municipal Government Building looks like the Hall of Supreme Harmony in Qing Dynasty. The structure of the Forbidden City is the traditional wooden lifting beam style, including roof truss, corbel brackets and column grid, these three layers were the classic construction of the Chinese traditional wooden buildings. While the construction layer of Shanghai Special Municipal Government Building was totally different, the original structure type could be traced back to Le Corbusier's Citroen residential structure system. There are three layers including floors lab, beam grid and column grid.



**Materials**



Masonry and wood were used for walls and windows as well as doors. All of the elements of form used Qing Style, now we could see the traditional double-weaves hip roof, previous red columns, long stone steps, and weaving wood of the windows. The stairs on the lower sides are made of Jinshan sesame stone. Stone steps in front of outside the ground directly face to the auditorium and form the bridge, which can make the horses and chariots driving straight to the front door. There were two stone lions and two flagpole sets. Exterior wall, foot sesame stone in lay build by laying bricks or stones, the upper part of exterior wall use artificial stone. All of the cement columns and beams outside are decorated with color.

The ordinary flat is decorated in white paint. All of the layers of the domestic hall are decorated with red tile ground, the rest of the room is artificial ground; the toilets are filled with white ceramic tile ground, the fourth floor is made of cement. Interior decoration of the doors and windows all use the high quality of eucalyptus wood. Halls, conference rooms, corridors use color of cement painting. The other parts use ordinary paintings. Every room has its own characteristic. From this part we could find that although this modern architectural style was popular with that period, the ideas of the most civilizations as well as the officials still prefer to remain our own culture inside.

### **Devices**

Facilities can be said pretty modern at that time. Communication equipment maintain completely, only outer calls rent the trunk lines from telephone office in Shanghai. The whole building had eight special user telephones, 200 automatic telephones and a set of equipment for President used to communicate with other ten people for the meeting. The Saloons equipped the master clock, the inside building was equipped 36 internal clocks, 455 lamp lights, 18 wall fans and 31 ceiling fans, while the food preparing room and kitchen equipped with one exhaust fan, and 2 lifts. The heating equipment using single tube downward, could heat pipe area of about ten thousand square meters. The volume of roof tank could store 6800 liters water. The basement installed hot water tank for 1800 liters. Each layer near the escalator, there was a pair of device fire hydrants, with 23 kilometers pipes on the wall.

## **6. Value**

### **Historical Value**

Since 1843, after the opening of the Shanghai port, the foreign capital as well as the foreign powers invaded into China. Shanghai urban developed malformed, with functional disordered, scattered layout, therefore. By the revolutionary forerunner Sun Yat-sen's indicator, the Nanjing national government made the <downtown area of Shanghai plan> and <Construction of the Great Plan in Shanghai> in the conjunction of 1930. This was the first overall, large-scale, comprehensive planning of urban development which was in pioneering meaning in the history of Shanghai city. From then on, the foreigners felt very panic seeing the rise of Chinese in Shanghai.

Since 1931 the city especially government building, Shanghai municipal library, Shanghai municipal museum, Shanghai stadium (Jiang Wan stadium) and so on, have been built gradually in Shanghai. But after the outbreak of the war "August 13" in 1937, these original government building of "Chinese inherent form" remained there from then on.

### **Political Value**

Nanjing provisional government now is fully replaced, and it becomes the memorial symbol of rolling wheels of the interim government history. It is said that the old government building witnessed the prosperity and decline of the history of the national government.

### **Functional Value**

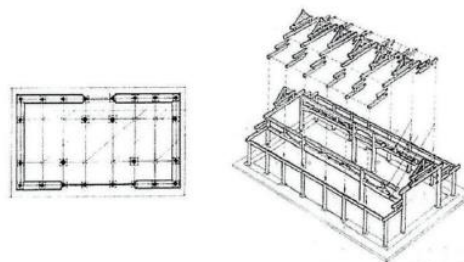
Now after the repair and transformation, this building has become the office building in the sports institute of administrative, mainly used for mentors offices, coaches 10 offices, political

instructor's office, lounges, lecture hall, exhibition halls and the reception hall. The past ruined buildings today is reused, and becomes the symbol of the school.

### [3]The Original Type

#### 1. The Traditional Palace Building

The prototype of the Shanghai Special Municipal Government Building is from the palace hall of supreme harmony in the Qing dynasty. No matter is the facade of a three-stage division, using materials, facade elements, or form of traditional Chinese architecture big roof, they all reflect the symbol of supreme notify of the right authority. Therefore, in the main building of the appearance and internal composition as well as the spatial layout, there reflects the all kinds of power factor.



Since the stability of overall Structure is one of the important technical problems facing the development of Chinese ancient architecture system. The Chinese craftsmen constitute a set of wooden frame system. They created a kind of purlin to arrange weight bearing roof rafters and play an important role of connecting. And the palace style structure divided into three levels, the lower layer for the forehead, the head of the column for laying brackets layer, the upper layer for roof framework. Obviously, the facade of the Shanghai Special Municipal Government Building dividing basis is derived from this, just slightly differences in the form of the roof respectively, one is double gable and hipped roof and another one is double-hipped roof.

#### 2. The Evolution of the Original Type

"Construction", is not only the construction, in another sentence, is the record of "culture" and history. (liang Sicheng)

Of course, the original point "Chinese inherent type" of the architectural creation should be the Nanjing Zhongshan Tomb designed by Lv Yanzhi in 1925. The design at that time was the most serious issue on the high ground according to national attention; Architects also played his supreme intelligence and creation. His second awarded art product, the Sun Yat-sen's memorial hall also reached the same height. Lv Yanzhi should be referred to the founder of historical age architectural culture.

These modern retro buildings used new technology and new material, most of which were the reinforced concrete component. And there are many new requirements on the using function. The huge roof caused great waste of space. Brackets made of concrete, the eaves rafter were intricate; And the paintings on the reinforced concrete beam, column, despite the need of appearance, there was not any practical significance; Many of the rooms due to the constraints of plane and elevation was not very reasonable used. Architects spent great effort to overcome these shortcomings, finally found: "pure Chinese style not only needs expensive construction cost, but also not practical". On the converging points of two historical age revivalism often shoulder the important mission of "updating in ways of ancient restore". But restoring ancient ways won't be eternal. When the new form born, building in restoring ancient ways will gradually retreat, and disappear because of its insurmountable historical limitations. Each era will appear the requirement of architectural form, this is the break through and development of traditional, not the everlasting continuation of the

unconditional. As a result of the architecture development itself, the impact of the new architecture, finally had the "hybrid type", "practical type" to "international style" of the building, and took a new step on the modern architectural creation in the early 1930s.



#### **[4] Comparisons with the Traditional Style and Western-Influenced Style**

In the 1930 s, Art Deco, as one of the main style of the modern Shanghai urban western building style, became an important part of urban visual landscape. Thus it makes Shanghai be the epitome of the "modern" architectural style under the age in the 1930's. Art Deco is good at using the Strong visual result by all kinds of ornament ways. In the era of Art Deco and modernism coexisted and competed against each other, it showed a kind of modern visual feast and won the reputation of fantasy modern sense of decoration with intense lighting effects. In terms of the appearance of the building, the Shanghai Art Deco and its endemic countries have many similarities, such as brick veneer, stone and concrete widely using. In the interior decoration, is seems to be some conservative classical trace. The Art Deco building influenced by modernism is concise in exterior, emphasizing on the vertical sense of order which can rarely detect the existence of the decoration, such as the Broadway mansions. The international style form similar with skyscraper architecture in US is a decorative language of abstract formal expression. It is not only the building itself, but also a disguised form of decoration.



Chairman MAO's memorial hall is one of the obvious forms from the western classical style like Lincoln memorial hall. Compared to the chairman MAO memorial hall, the biggest difference lies in the understanding of national character and artistic style. Including Liang Sicheng, Liu Duizhen, Yang Tingbao these people, the research they did and contribution they've made, is a very good promotion for the Chinese nationality rising up in the west and the cultural invasion.

#### **[5]The Architectural Heritage Protection**

By now, The Shanghai Special Municipal Government Building has been around for 80 years, it witnessed the change of modern history, while now has completely lost the function of the original purposes. In addition to this, most of the ornament and decoration are made of timber which is easily to corrupt, so how it was protected to keep its real state?

To save the old style, then remove, repair and construct.

Characteristics of the ancient Chinese architecture are the wood construction, up to the temple, palace, down to the storeroom, houses. For thousands of years, it formed a set of function, structure, and art as one of the special charm of wood construction in China. But, the wooden building is easy of deterioration, and easy to be ate by moths, easy to burn, easy to deform, if it is not to be repaired and protected in a right way, it is difficult to maintain for a long time. So the original artifacts will be based on the principle of the Venice charter 11. The recovery is not to torn down the original ancient buildings, but to recovery on the premise of fully respect the original material. As the China's cultural relic protections always follows the principle of "do not change the original state of cultural relics" and "original reality" principle.

Now after the repair and transformation, this building has become the office building in the sports institute of administration, mainly used for mentors offices, coaches' offices, political instructor's office, lounges, lecture hall, exhibition halls and the reception hall. The past ruinings of buildings today is reused, and becomes the symbol of the school. The attic part renewed as the exhibition hall. These show evidently that the way to reuse is the best way to activate historic buildings.

In the overall layout of reusing aspect, why the core region in the big Shanghai plan nowadays becomes the site of Shanghai sports institute?

By observing the site plan comparison, the original square is not covered by new buildings, but as a land for sports, such as basketball court, tennis court and soccer court. These ways greatly helped to retain the original square scale, and made the original historical preservation construction not concealed by such modern tall buildings, on the basis of the original reality, the building retains the original host of the position, scale and the axis of the original planning square.

## References

- [1] Liu Dunzhen, Chinese ancient architecture history, Beijing, China building industry press
- [2] Zhao Liying and Herong, Chinese Palace building, Beijing, China building industry press
- [3] WuJiang, Shanghai architectural history in one hundred yeas 1840-1949 [M]. Shanghai: tongjiuniversity press, 2008.
- [4] Zheng Shiling, Shanghai modern architectural style [M]. Shanghai: Shanghai education publishing house.1999.
- [5] Chen Congzhou and Zhang Ming, Shanghai modern architectural history [M]. Shanghai: Shanghai sanlian bookstore, 1995.
- [6] Xu Yihong, Art Deco source and flow ----- Chinese and western "modern architecture" studies [M]. Nanjing: southeast university press, 2006.
- [7] An Keqiang, "1927 --- 1937 regime of a city, local and modernity in Shanghai", Shanghai ancient books publishing house, 2004
- [8] Zhao Liying and Herong, Chinese Palace building, Beijing, China building industry press
- [9] WuJiang, Shanghai architectural history in one hundred yeas 1840-1949 [M]. Shanghai: tongjiuniversity press, 2008.
- [10]Zheng Shiling, Shanghai modern architectural style [M]. Shanghai: Shanghai education publishing house.1999.