

Brief Analysis on Monumentality in Architectures Based on the Itamaraty Palace of Oscar Niemeyer

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ABSTRACT

Many architectural works convey a kind of eternal monumentality to the audiences through the architects' ingenious use of space and physical elements. The author explains the definition of architectural monumentality, deeply explore the artistic characteristics of monumental design and its commonly used space elements, and analyze how to create a strong "spiritual field" by means of material shaping so that an emotional resonance can form between the audiences and the space. At the same time, the author analyzes the approaches of space layout and composition elements employed by Oscar Niemeyer in his architecture work in Brasilia, Itamaraty palace (Palácio Itamaraty), to exemplify the discussion on the architectural monumentality in the article, and analyze how the monumental features in architecture serve the building itself.

Keywords: *Itamaraty Palace, Monumentality, Architecture, Design, Oscar Niemeyer*

1. INTRODUCTION

Itamaraty Palace (Palácio Itamaraty), also known as the Palace of Arches (Palácio dos Arcos), is located in Brasilia, the capital of Brazil. It is now used as the building of the Brazilian Ministry of Foreign Affairs. The Itamaraty Palace was designed by the Brazilian architect Oscar Niemeyer. Construction began on September 12, 1960, and was completed on April 21, 1970. In the architectural design, Oscar Niemeyer transforms Corbusier's functionalism into a more emotional minimalism. His works are not the buildings derived from functions, but rather follow the steps of aesthetics. They look impressive and balanced. Their indescribable sculptural sense reflects the exact moment of architectural essence, and the concrete blocks convey its unique lightness and elegance. Oscar Niemeyer's works embody the universality of modernism in the mid-20th century, the unique regional characteristics of Brazil and the unique style of individual. It gives full display to the plastic characteristics of concrete, and uses the curved design language to make the building have a unique sculptural sense, and also makes the architectural space present a "Brazilian baroque style with romantic feelings." [1] Under the unique use of space and materials by Niemeyer, the Itamaraty Palace conveys a sense of permanence and monumentality to the audience all the time. When visitors approach the building and step into it, none of them can avoid being shocked by the ingenious use of space. When spiritual resonance are established between the visitors and the building, without any exception, they have a strong sense of veneration and admiration. In fact, this so-called monumentality also exists in many other architectural masterpieces. The architects use their unique means of physical creation to establish a unified emotional resonance

with the viewer. Though differences occur in different architectural works with monumentality, there must be similarities in terms of artistic features and elements.

2. THE DEFINITION OF ARCHITECTURAL MONUMENTALITY

As Louis Kahn defined in his piece in 1944, "Monumentality in Architecture may be defined as a quality, a spiritual quality inherent in a structure which conveys the feeling of its eternity, that it cannot be added to or changed." [2] Monumentality is a kind of aesthesis expressed through architectural design. It is an inherent spiritual quality containing in the structure and space of architectures. The monumental design forms a special "spiritual field" through the material shaping, which causes completely unified spiritual influence on the viewers, and forms a strong spiritual connection between the viewers and the design itself. Monumental space combines the theme, space and emotion organically, forming its vivid and clear appearance and conveying the feeling of eternity through the pursuit of the perfection of structure and space.

3. THE ARTISITC FEATURES OF MEMORIAL DESIGN

Firstly, the spiritual symbol is the most important feature of the monumentality of architecture and monumental design. In monumental design, the use of space, material, symbols and other elements often expand from a specific spiritual symbol. This spiritual symbol can be derived from the function of the building or the space (for example, the sense of solemnity of a government agency), the idea that the

designer wants to convey, or the sense of reverence and piety needed in religious belief.

Secondly, the arches used repeatedly in the periphery of Itamaraty Palace, as the most primitive and ingenious load-bearing structure, symbolize the strength and security, both of which are in line with the diplomatic mission of the Brazilian Ministry of Foreign Affairs "the protection of Brazilian interests with governments of other States and international organizations." At the same time, the form of the gate, or portal, expresses an attitude of openness, which is in line with the purpose of Brazilian Ministry of Foreign Affairs.

Thirdly, the spiritual interaction between space and human is a commonly used approach to convey spiritual symbols in monumental design. Oscar Niemeyer analyzes the psychology of the viewers, caters to people's common commemorative behavior, and creates a stirring and eternal atmosphere in the monumental space. In the creation of Itamaraty palace, Niemeyer repeatedly used the sign of huge arches with similar size and shape, evenly arranged them outside the three-story square glass building, strengthening the architectural image, forming an extremely solemn atmosphere, so as to achieve the heartshaking effect.

4. ELEMENTS COMMONLY USED IN THE CREATION OF MONUMENTALITY

Different from the vast majority of general space design with practicability as the main purpose, monumental design regards establishing monumental and heartshaking atmosphere and conveying its specific theme as the priority. The designer fully caters to the topography where the architecture stands, employs the architectural modeling, the space axis, the material and texture, plant (water system) landscaping and some other elements to encourage the interaction between people and space, and establish the "spiritual field" between the viewers and the space[3].

4.1. Natural environment and landscaping

The natural environment includes topography- which refers to the surface condition of the building's location-climate, vegetation, etc. Designers often employ the natural environment characteristics of the building as the background of space or creating a needed atmosphere to enhance its unique monumental spiritual field.

During the construction of the Itamaraty Palace, Oscar Niemeyer surrounded the building with a orthogonal water surface. There were six independent roads around the building passing through the water and leading to the interior of the building. The water surface is adorned with several plants to beautify the environment. Itamaraty Palace is located in the Brazilian plateau, with high altitude but low latitude. It has a savanna climate pattern, long sunshine time, dry and hot climate, and huge temperature difference between day and night. A large area of water surrounded plays a nice role in micro-climate regulation.

Thanks to the construction of protective forest in the south of Brasilia, there is little wind in Brasilia all the year round so that the water surface can keep calm for a long time. The huge water surface of roughly 155 meters in length and 120 meters in width can reflect the image of the architecture completely and thoroughly in the water, increasing the visual volume of the building, producing symmetry, enhancing the sense of spiritual impact, and thus reflect the sense of monumentality. The height of the building is 15.01m, assuming the height of a person is 1.7m, and the most comfortable visual zone of human is 60 degrees, After calculation, the water surface needs to be at least 28.9 meters wide, so as to produce a complete reflection of the building. However, the width of the widest part of the water surface is roughly 58m, which can reflect the landscape, vegetation and part of the sky around the building in the water with the building itself. At the same time, the glass wall inside the colonnade can produce a mirror effect along with the water surface, so that the water surface, the sky, the building and the vegetation are integrated together, which connect the inside and outside of the building, producing a strong sense of mystery and ethereal, and enhancing the effect of monumentality.

4.2. Architectural modeling

In monumental space, it is essential to fully display the main shape of its emotional communication, which is the core content of the monumentality. The main body shape often appears in the form of sculpture. Abstract or concrete sculptural form, as the most primitive and direct way of commemoration, can often surpass its original form to express its deepest spiritual connotation. Just as Roger Scruton, a contemporary British philosopher, said in his "architectural aesthetics", sculpture helps people to understand architecture. Sculpting monumental space can often express the connotation that cannot be expressed by general architectural forms and create a needed spiritual field.

The architectural form of the Itamaraty Palace contains two portions: the three-story cubic building surrounded by the glass outer wall and the concrete arched portico. As a vertical linear theme element, there are 14 arched doors on each side of the building. A total of 56 arch doors surround the central glass building, forming a circular corridor space layout and increasing the building volume. The arched portico forms a buffer space (gray space) between the glass building as a private space and the external landscape as a public space to enhance the privacy, which is conducive to the security and confidentiality of government personnel working inside. At the same time, the colonnade structure forms a progressive air microcirculation, which makes the building indoor warm in winter and cool in summer, which plays the role of energy conservation and environmental protection. The 56 arched doors are concise and powerful, with smooth lines, rough and clear texture without any additional decoration, conveying a strong sculptural sense. The height of the colonnade is 15.01 m, which is about 8.8 times of the average height of a normal person. It is even

higher than a typical monumental building in history, the Parthenon, which is of 13.72 m. When the viewer passes through the colonnade, there is a strong sense of oppression, mystery and awe comes straightly into one's mind. This is Niemeyer's unique interpretation of "spiritual field" in his monumental design.

4.3. Spatial axis

In monumental space, the expansion line of sequence space is called the spatial axis. The spatial axis can play a role in forming emotional streamline and creating spiritual atmosphere in the building process of monumental space. In the combination of spatial patterns, we can use the spatial axis of symmetry or asymmetry, ideological or spiritual, emptiness and even chronological to fuse the space together, determine their order, and form a spatial structure with primary-secondary relation and hierarchical relation.

In the process of urban construction in Brasilia, the East-West axis is set as the main spatial axis, and there are important governmental agencies, including the presidential palace, the Supreme Court, the parliament building, etc. The North-South axis is shaped like a wing and serves as a residential as well as commercial area. The overall layout of Brasilia is like a jet plane. The Itamaraty Palace, the Ministry of foreign affairs, is located in the "nose" area at the eastern end of the East-West main axis. The clear spatial axis makes the city clear. Based on the macro spatial axis of Brasilia city layout, Niemeyer abandoned the strict spatial axis in the Itamaraty Palace and spatial layout of the building, which weakens the symmetry of spatial layout and produces a sense of affinity to the people.

4.4. Material and texture

The material used in the creation of monumental space and the texture of the surface are also important elements that catalyze the psychological reaction of the viewer and strengthen the spiritual field. At the same time, the contrast in material and texture of adjacent space can lead to the sudden emotional changes of the audience, and make use of the spiritual function streamline to promote the emotional reaction of the viewers, and complete the accumulation and burst of emotion with the transformation of time and space.

There are two main materials appearing on the surface of the Itamaraty Palace: concrete and glass. The arched portico outside the building is made of concrete. Concrete has the features of hardness, roughness and firmness. When the concrete forms an arched portico stands in the water and roots in the soil of the Brazilian plateau, it conveys an indescribable sense of integration and resonance with the earth, symbolizing the unique characteristics of the native people of Latin America, including simplicity, perseverance, tenacity and

elegance[4]. At the same time, the granular mechanism of concrete surface creates a rough stone-like surface, which exudes the sense of age and heaviness, forming a strong contrast with the glass wall with modern sense and mirror like water surface inside, which promotes the formation of viewer's spiritual streamline and emotional burst, and enhances the intensity of "spiritual field".

5. CONCLUSION

The monumentality in architecture is an aesthesis, mostly with eternity, solemnity, and veneration, that architects produce with the audience through the use of material elements and the space. The use of monumentality will make the viewers experience the architectural works themselves to a greater depth and reflect the spiritual symbol of the architectural works. Monumental spaces often expand from a specific spiritual symbol, and convey the spiritual symbol by encouraging interaction between human and the space. For example, the sign of large arches used in the periphery of the Itamaraty Palace has left a deep impression on the audience, conveying the symbol of Brazilian Ministry of Foreign Affairs' goal of defending Brazil's interests and opening up diplomacy. In the creation of monumental space, designers often use specific elements to establish a strong "spiritual field" that establishes an emotional resonance between human and the space. The elements include topography, architectural modeling, the space axis, material and texture, plant (water system) landscaping, etc. Itamaraty Palace is located in a flat and open area, with the sky and water as the background, setting off the spatial outline and enhancing the spiritual impact. At the same time, it is decorated with a small amount of plants to improve the beauty of the environment. The building itself contain a strong sculptural sense, and the external stone texture and the internal glass wall form a sharp contrast in material and texture, which stimulates the audiences' emotion to burst. The building of the Itamaraty Palace as well as its surrounding landscape convey a strong and eternal monumental color to the visitors, which makes the visitors have an admiration and shocking psychological reaction when approaching the building. It successfully displays the solemnity of the Brazilian Ministry of Foreign Affairs as a government department, which is conducive to maintaining the safety and privacy of government personnel when working inside. At the same time, because of abandoning the strict spatial axis, it shows a certain affinity to the people. The application of memorial features in architectural works not only meets the functional requirements of specific places, but also has strong artistic value, killing two birds with one stone.

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