# From Functionalism to "Meaning Space": the Semantic Shift of Modern Architecture

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**Abstract:** The method of modern architectural design is based on the design perspective of form and function, considering the facade composition and plane organization from geometric morphology, presenting the architect's functional aesthetics and design symbolic ideas. Since entering the post-modern era, the architectural form and The meaning is more diverse. The article attempts to interpret the semantic features of the connotation of postmodernist architecture from the perspective of space. It explains that "space" in the expanded sense is polysemous, coded and multi-attributed. Finally, it points to the construction of society and people by architecture using spatial logic. And guiding role.

## 1. Introduction

Modern architecture originated from the nature and rationality of Frank Wright and Adolf Luz, and matured in the outstanding works of architects such as Gropius, Mies van der Rohe, Le Corbusier, etc. The term "functionalism" covers the core concepts and principles of architectural space construction, the use of materials, and the organization and production methods. However, functionalism conceals some facts about modern architecture. That is, although architecture is practical-oriented, architecture also follows the laws of modern culture. Architecture also has strong autonomous requirements and obeys the differentiation of real aesthetic experience. -The subject of true aesthetic experience is liberated from the needs of daily life and explores spontaneously. Just like avant-garde art, get rid of imitation and harmony, get rid of pure realism, and turn to oneself for expression. The internal logic and aesthetics of the building itself are thinking about space, which inevitably requires getting rid of the shackles of form and function and returning to thinking and practicing the essence of space.

## 2. The Dilemma and Self-Rebellion of Modern Architecture

In the 1920s, the pioneers of the modern movement built a series of representative works of new white buildings: Mies van der Rohe designed the Barcelona German Pavilion, Gropius built the Bauhaus school building, and Alvar Aalto designed The hospital and the private residence of Gropius. As a famous historian in the modernist movement, Nicholas Pevsner also praised the indifferent and impersonal style of new abstraction. In the 1950s, modern architectural styles became more internationalized and became a model for emulation of emerging industrial cities, but this reduced the local characteristics and cultural connotation of the building, and therefore it also encountered countless oppositions. Moreover, the "functionality" of functionalism is mostly to build houses in accordance with the purpose of users. With the increase in population density in the city center, and the accompanying increase in real estate and tax prices, it will eventually fail to be in the living areas of residents and surrounding residents. Has practical functions. Louis Mumford once criticized modernist architecture as a cold machine with no ideas, lack of innovation, and lack of connotation. He used his words to describe the modernist style: "This style only exists in platonic fantasy, because we must also consider To the environment, climate, insulation, function, and internal activities of the building itself." In the field of architecture, Robert Venturi's 1966 "Complexity and Contradiction of Architecture" also criticized the "orthodox" Modernism" and advocates the use of formal methods to express the complexity of urban life. In the 1970s,

McEwan's "Architectural Crisis", Brent Broly's "The Failure of Modernist Architecture", and Peter Black's "Form before the Fiasco: Reasons for the Failure of Modernist Architecture", these discussions All point to the systematic failure of modernist architecture. The modernist architect Le Corbusier also launched the first postmodernist attack on "superficial modernism" in his later years. He believed that the buildings in Paris and New York were behemoths constrained by form. In his later years, he designed landmark buildings in his life, the symbolic buildings in Chandigarh, India, and the Langxiang Church in France, which marked the modernist masters' doubts and rebellion against modernism itself. Le Corbusier's works in his later years were based on images, and were full of elements similar to paper-cut collage. The architecture used deconstruction, overlap, exaggeration, deformation, and collage to express metaphorical aesthetic elements, expressing a kind of inconsistency. The spirit of detachment and freedom bound by any rules and regulations indicates the transition and transformation of modern architecture to postmodernism. The architecture of Langxiang Church and Chandigarh (picture 1) highlights the deconstruction of the modernist concept of "functional supremacy", and no international style or idea can dominate the trend of the times. In this way, the birth of pluralism is market-driven. In the industrial age, modernist architecture derives inspiration from industrial architecture; when it comes to commercial society, the vocabulary of commercial architecture should be considered. Just like Venturi uses symbol theory to transform the values contained in facades, billboards, neon lights, patterned wrapping paper, and various texts in the secular environment into architectural language, so that architectural vocabulary is interesting, semantic and rhetorical And rich and diverse. Since then, complexity and nonlinearity have become architectural theoretical ideas, while the core of postmodernism such as self-organization systems, emergencies, chaos and irregular fragments have become architectural design principles and theoretical guidance, and architecture has turned to the right Explore and think about more possibilities of own logic.



Fig.1 Chandigarh Parliament Building and Public Art

## 3. The Semantic Expansion of "Architectural Space"

The modernist design value crisis in the 1960s opened a new stage in the relationship between design and culture. Culture itself has also been redefined, because culture is encouraged to accept different social and cultural groups and give them an equal voice. In the post-modern trend of thought, inclusive and mixed culture has become a trend: Ignore the dividing line between high culture and popular culture so far; start to look for the "marginal" voices such as gender and race to the center and avoid "Value judgments based on the "old order" standard. This all-encompassing cultural definition shifts architectural design to concept-oriented work without material results, and also dispels the illusion of perfection and elegance, and instead focuses on the aesthetic pursuit of mediocrity and popularization.

### 3.1 Architectural Space: Multi-Form Codes and Codes

Lefebvre pointed out: "Space is political." Space has always been political and strategic. Space has long been occupied and managed, and has become a strategic object. It is precisely because the "pure" form of space has been abstracted through a rational abstract behavior. Therefore, no trace of

it was found. The codes of architecture and space effects are diverse. The water, fire, soil and air of the external environment, internal materials and equipment, etc., the space constructed by the building and the status of the subject produce different semantic features according to different codes and codes. The space of the building has a dual characteristic: under the camouflage of unity, it is a fragmented and restricted space, and it is also a space in a state of isolation.  Air, water, light, and heat are gifts of nature, and the use value of nature has also entered exchange value. Nature as space, together with space, is divided into fragments, bought and sold in the form of fragments, and occupied by the whole, So the entire space becomes a place for reproduction of production relations. Just as Frank Gehry's headquarters building designed for Carter Di's advertising agency (Figure 2) was given a garage in the shape of binoculars to mark its entrance and its ability to display identity, and Hans Holling's design combines the early modernist style and the language of modern art (Figure 3), and shows their opposites. His representative work is an Austrian Austrian Austrian club designed in Austria. This building jumps out The established restrictions combine the characteristics of humor and complexity, reflecting the mixed and eclectic style and strong commercial atmosphere. Coconut and palm trees made of metal seem to make people "experience" the fun of the sea; the sparkling dome also seems to be in India; and the tempered stone pillars symbolize the history and culture of Rome.

Undoubtedly, these two forms of architectural design bear the role of advertising. Here, the production of space is similar to the production of commodities, and the building and interior decoration symbolize the relationship between capitalism and the identity and status of the experiencer. "Architecture" is a term with rich meaning. It can refer to a certain skill, craft or artistic ability, can also refer to the use of the skill or craft in the design and construction of things, and can also refer to the design and construction of the object itself.  Although it is different from other art, because of its materiality, publicity, space and interaction with the body, in fact, its potential compulsion and suggestiveness are more convincing, especially the complicity with commercial culture At that time, design and art became the background decoration of commercial products or architectural spaces. The vision in architecture and space is just one of the many codes and coding forms of architecture. The senses and communication also come from the physical experience of space, volume and proportion, just like facing Frank Gehry's binoculars-like architecture , The body as a whole and the building form a huge difference. The body is not concerned with the symbolic object itself, but a certain symbolic aspect of the multidimensionality, openness and entertainment of the symbolic object. Therefore, building materials and equipment are only part of many coding methods, and the form, function, and structure of buildings are just one aspect. Since then, the multi-dimensional value and super-functional value of buildings have become an important part of practice.



Fig.2 Signed by Frank Gehry



Fig. 3  Hans Holling, Austrian Tourism Agency

## 3.2 Multiple Attributes of Architectural Space

Architectural space is primarily the existence of material, and the "practical" of the laws of physics must be obeyed, that is, it has to be filled with concrete functions and has to meet the needs of architecture-this constitutes the armor of pragmatic functionalism. Secondly, there is also a

"symbolic" level: architecture expresses and conveys a certain conscious meaning. Finally, there is an "imagination" space, which is the feeling of those who live in the architectural space. Therefore, the architecture itself has three levels of meaning-material, symbolic and imaginary. As far as the space of architectural construction is concerned, it also corresponds to the above three meanings. Lefebvre pointed out that space is not only the existence of matter, but also the existence of form. The existence of form does not just stay in the subject category of mathematics, but refers to form. Related content. For example, the space constructed by architecture belongs to the logical category of mathematics and technology, and is regarded as the object of science. However, its objectivity and "purity" also endow it with a neutral characteristic. As a container, space has only Only through the content can existence and value be obtained. Then the space has the inevitable logic and factuality. The content of the space is the value and meaning of the space, and the content must interact with the space. Therefore, space has material properties, but it is by no means a material existence that has nothing to do with human beings, human practice, and society. It is precisely because people are involved in it that space becomes meaningful. For example, public memorial buildings-plaques, monuments, monuments, etc., are opposed to the main body of people or ethnic groups, and are "interactive spaces" formed by building materials and visual perception. In addition, the architectural space also has its spiritual attributes. For example, when a sculpture used to "increase vitality" appears, the symbol of this object again triggers the symbol of the symbol. For example, the two Holocaust memorials designed by Libeskind and Eisenman-the war memorial and the occupation memorial, are very typical examples. Architects regard historical events as the starting point for aesthetic or symbolic works (Figure 4). The Jewish monument designed by Senman is used as an indicative symbol to explain the facts in a rhetorical way: "The 2,711 blank tombstones of the unknown dead cast different five-color shadows under the sunlight. The buildings are integrated into the city, into the park, Adjacent embassies and riverbanks." The building constitutes a volume space, a monument surface image symbol and a blank amnesia index symbol. When people move through it, the symbolic meaning becomes more prominent. Architectural space is created by humans, so architectural space is a type of social space. It not only satisfies this formula, but is also a product of society. Social space is the space where people actually live or produce places and relationships. It is a bracket of spatial hierarchy or scale. Such a space is abstract and real. "Social space, as a means of production, cannot be related to productivity. The social division of labor (technology, knowledge) or labor is separated, or separated from the superstructure of the state and society." For example, ancient Roman squares, Colosseum, court buildings, and religious buildings are all ideological things. Society operates through the space of architecture. The boundaries of social class, social class, and other social groups (such as gender, ethnic group, class, etc.) and the social power relations between them are all embedded in a certain space. The practice of social space is through architecture. Explain and show the space.



Fig.4 Eisenman, Jewish Monument, Image Source: Internet

## 4. The Narrative of Architectural Space

As a space producer, the architect operates in a specific space. The architect completes the reproduction of an object or space and the reproduction of the world through decoding-recoding. In the "Manhattan Manuscript", Tschumi discussed a "new order". What Tschumi considered was no

longer organizing space into a function, or organizing space according to economic, aesthetic, or technical-utilitarian norms. He tried to establish a new architectural philosophy, pointing out that architecture is a tool for questioning and correcting social structures, and he used procedures and spatial installations in architectural practice to break the hierarchy of power. His design resorted to deconstructing language and re-encoding space. Space is used as a place for "happiness" and "play", and space means the invasion of the body. The body can perceive the space only through experience, and the interval formed by the physical examination of the building shows that the events of the building are also constructing and guiding us. Therefore, Qumi's work means a kind of event architecture because it constructs some places-something happens in it, or the construction itself becomes what we call events. Architect's coding means that the qualification of space through behavior is the same as the qualification of behavior by space; space and behavior are inseparable, and any reasonable interpretation of buildings, sketches and symbols should not deny this fact. As he said: "There is no building without action, there is no building without events, and there is no building without procedures." The relationship between architecture and users, space and events, and procedures are all self-sufficient. of. When space and program are largely independent of each other, an irrelevant strategy can be seen, architecture can not rely on functional considerations, space has its own logic, and events have another logic. For example, he designed the New Acropolis Museum in Athens (Figure 4), intended to tell a story about ruins buried in the ground. The design omits the redundant lines and planes to the simplest, deliberately not to make the museum "monument", but to guide the visitors to focus on these unparalleled exhibits, and the viewers perceive the ancient history by walking in the space With culture, and with the script of architectural design, people's sports experience is controlled by the architect. The architect's design intention is constantly clear and deepened in the development of the gradual event plot, and the atmosphere of the story continues to precipitate. As a result, a deep emotional resonance is formed.



Fig.5 The New Acropolis Museum in Athens, Designed by Kymi

## 5. Conclusion

Architecture creates a variety of spaces, and uses the existence of space to implement influence. These spaces also exist as symbols. They symbolize or describe the complexity and multiplicity of architecture. Architecture is the container of people's social activities, and people are the main body of space use. Without human participation, architectural space appears pale and weak. Humans interact with space through the participation of the body, but the body itself is also vague and dual. On the one hand, it is a natural body, and on the other hand, it is a social body. One is materiality and the other is an abstract form given by society. . Therefore, space is connotative and multi-intentional. It is related to the subject of use and related to the activities and events that occur in the space. The space itself is also producing meaning. When people fill the space with more symbols, this space is not producing the signified, nor does it work for the signified. This is a place where the relations of production are reproduced. All manifestations in the space, material, culture and language the environment is mixed.

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