

# AESTHETICS IN ARCHITECTURE: UNITY OF FORM, FUNCTION AND MEANING

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**Abstract:** In modern architectural design, "formal beauty" and "functional beauty" have become a new concept. At present, architects have gradually attached importance to the functional and aesthetic aspects of architecture in contemporary architectural design, and have pursued a comprehensive approach. This article provided corresponding countermeasures on how to enhance the functional and formal beauty in architectural design. By discussing and emphasizing the key role of architectural aesthetics in modern architectural design, the balance between aesthetics and practicality can be promoted to meet the contemporary society's needs. By exploring the connotation of architectural aesthetics, this article briefly summarized and explored the meanings of functional beauty and formal beauty in architectural design, emphasizing the application of architectural formal beauty in modern architectural design. In real life, architectural aesthetics, through the comprehensive embodiment of formal beauty, functional beauty and symbolic beauty, not only provides people with actual living space, but also enriches people's life experience through its appearance, connotation and symbolic significance, shapes the city's and society's face, and becomes a part of culture and history. In different historical periods, architectural aesthetics have the times' different characteristics. In modern society, there have been more new developments and changes in architectural aesthetics. Among them, the unity of function and form is one of the most important features in architectural aesthetics. At the same time, with the changes of social history and cultural concepts, architectural aesthetics also reflects the times' certain characteristics. This article explored the integration of functional beauty, formal beauty, and meaningful beauty in modern architecture from the perspective of modern architecture, and promoted the development of modern architectural art through scientific methods. This paper emphasized the importance of pursuing the unity of form and function in architectural design. This means that the building should not only be attractive in appearance, but also meet the actual needs and functional requirements. This unity can create beautiful and practical architectural works.

**Keywords:** Symbolic Beauty. Formal Beauty. Functional Beauty. Aesthetics Significance.

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**Resumo:** No projeto arquitetônico moderno, a "Beleza Formal" e a "Beleza Funcional" tornaram-se um novo conceito. Atualmente, os arquitetos têm gradualmente dado importância aos aspectos funcionais e estéticos da arquitetura, no projeto arquitetônico contemporâneo, e têm buscado uma abordagem abrangente. O presente artigo ofereceu soluções correspondentes para aprimorar a estética do projeto arquitetônico, tanto formal quanto funcional. Para atender às necessidades da sociedade moderna, é importante debater e enfatizar o papel crucial que a estética arquitetônica desempenha, no projeto arquitetônico moderno. Ao explorar a conotação da estética arquitetônica, este texto resumiu e explorou brevemente os significados da beleza funcional e da beleza formal, no projeto arquitetônico, enfatizando a aplicação da beleza formal arquitetônica, no projeto arquitetônico moderno. No mundo real, a estética arquitetônica, por meio da incorporação abrangente da beleza formal, da beleza funcional e da beleza simbólica, não apenas oferece às pessoas um lugar para morar, mas também enriquece suas vidas com sua aparência, conotação e significado simbólico; ela ajuda ainda a moldar o caráter da cidade e da sociedade e se torna parte da cultura e da história. Em diferentes períodos históricos, a estética arquitetônica tem características diferentes, próprias da época. Na sociedade moderna, houve mais novos desenvolvimentos e mudanças, na estética arquitetônica. Entre elas, a unidade de função e forma é uma das características mais importantes da estética arquitetônica. Além disso, quando a história social e as ideias culturais mudam, certas características específicas da época podem ser vistas na estética arquitetônica. Este artigo explorou a integração da beleza funcional, da beleza formal e da beleza significativa, na arquitetura moderna a partir da perspectiva da arquitetura moderna, e promoveu o desenvolvimento da arte arquitetônica moderna, por meio de métodos científicos. O texto enfatizou a importância de se buscar a unidade de forma e função, no projeto arquitetônico. Isso significa que o edifício não deve ser apenas atraente na aparência, mas também atender às necessidades reais e aos requisitos funcionais. Essa unidade pode criar obras arquitetônicas bonitas e práticas.

**Palavras-chave:** Beleza Simbólica. Beleza Formal. Beleza Funcional. Significado Estético.

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# AESTHETICS IN ARCHITECTURE: UNITY OF FORM, FUNCTION AND MEANING<sup>1</sup>

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**Abstract:** In modern architectural design, “formal beauty” and “functional beauty” have become a new concept. At present, architects have gradually attached importance to the functional and aesthetic aspects of architecture in contemporary architectural design, and have pursued a comprehensive approach. This article provided corresponding countermeasures on how to enhance the functional and formal beauty in architectural design. By discussing and emphasizing the key role of architectural aesthetics in modern architectural design, the balance between aesthetics and practicality can be promoted to meet the contemporary society’s needs. By exploring the connotation of architectural aesthetics, this article briefly summarized and explored the meanings of functional beauty and formal beauty in architectural design, emphasizing the application of architectural formal beauty in modern architectural design. In real life, architectural aesthetics, through the comprehensive embodiment of formal beauty, functional beauty and symbolic beauty, not only provides people with actual living space, but also enriches people’s life experience through its appearance, connotation and symbolic significance, shapes the city’s and society’s face, and becomes a part of culture and history. In different historical periods, architectural aesthetics have the times’ different characteristics. In modern society, there have been more new developments and changes in architectural aesthetics. Among them, the unity of function and form is one of the most important features in architectural aesthetics. At the same time, with the changes of social history and cultural concepts, architectural aesthetics also reflects the times’ certain characteristics. This article explored the integration of functional beauty, formal beauty, and meaningful beauty in modern architecture from the perspective of modern architecture, and promoted the development of modern architectural art through scientific methods. This paper emphasized the importance of pursuing the unity of form and function in architectural design. This means that the building should not only be attractive in appearance, but also meet the actual needs and functional requirements. This unity can create beautiful and practical architectural works.

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## INTRODUCTION

In modern society, architectural aesthetics, as a special form of art, holds a special position (Liu, 2023, p. 175). Kant put forward the concept of formal beauty in his book *Critique of Aesthetic Judgment*, which depends on the appearance, structure and shape of the object, regardless of its actual use or function. Kant divided beauty into “free beauty” and “dependent beauty”. Although the beauty of form, function and meaning in architectural

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aesthetics have their own unique features, integrating and unifying the three can better showcase the strengths of architectural aesthetics. This paper analyzes the characteristics of architectural aesthetics in different historical periods, especially its development and changes in modern society. The importance of the unity of function and form in modern architectural aesthetics is emphasized, so as to create beautiful and practical architectural works.

The traditional Chinese architectural decoration art embodies the countless sages' wisdom, which has a long history and profound cultural significance. In traditional Chinese housing, the decoration of houses not only carries various cultural phenomena from the people and the society's various sectors, but also conveys some historical messages to the world (Ren, 2021, p. 1). Islamic architecture is influenced by Islam, and their architectural style and design usually reflect the principles of Islamic belief. For example, mosque buildings usually include typical Islamic elements, such as pointed arches, domes and church towers. Traditional architecture in China is influenced by traditional cultures and religions, such as Buddhism, Taoism and Confucianism, so temples and palaces also contain rich religious elements. The aesthetic appreciation of Islamic art is not only Ghazali's, Farabi's, Ibn Sina's and other Islamic scholars' profound reflection on poetry and hadith, but also the result of the architects' intuitive understanding and practice on religion and ideology in the context of Islamic culture (Mohammadi; Mahin, 2021, p. 612).

Islamic architecture is an important part of Islamic culture, which has unique aesthetic characteristics and styles, and reflects the values of Islamic culture and religion. The aesthetic characteristics of this kind of building can be traced back to the early history of Islam, and its design and decoration have experienced many evolutions and developments in history. Islamic architecture is famous for its exquisite geometric patterns and decorations.

These patterns are usually a response to the prohibition of depicting people and animals in Islam, so geometric shapes and abstract patterns are widely used in architecture. These decorations not only beautify the appearance of the building, but also reflect the vault, columns, walls and other parts inside. The theory and practice of the concepts of "exterior" and "interior" in the Islamic architectural community have significant differences, whether from a simple geometric perspective, or from an artistic or aesthetic perspective.

However, it is rare to analyze it from the perspectives of ideology and reasoning value. This gap is caused by issues with the interpretation of Islamic art works and their visual readings (Al-Fahmawee, 2022, p. 3). The effect of the use of "natural" elements in "architecture" in urban residential buildings, in Iran, can be analyzed using the "creation" index in "architecture" (Azizibabani; Mohammadreza, 2022, p. 50). A revolution in the history of Roman architecture created new structures, such as arches and domes, although there was no indication that the exploration of form and aesthetics had become an inseparable whole in this project. Until now, conceptual design is not always taught in universities, as can be

seen from the large number of anonymous and frequently occurring practical constructions that can be seen everywhere (Heggade, 2021, p. 622). Each country's architecture has its own unique architectural aesthetics, and various architectural beauties need to be analyzed from a multidimensional perspective. Architectural aesthetics is a discipline that studies the theory and philosophy of beauty in architectural art and architectural design, which focuses on how architectural works shape, express and convey beauty in aesthetic and cultural background.

Parameterized buildings often have eye-catching appearances, such as statues that capture the pedestrians' gaze. However, current research on the internal environment of parameterized buildings mainly focuses on external aesthetic needs, and research on its internal environment is relatively lagging, which can lead to disharmony between the quality of the internal environment and the appearance of the exterior walls (Hazbei; Carmela, 2021, p. 10). Although aesthetic education has become a universal educational concept in the world, the definition of the concept of aesthetic education is mainly based on Western philosophy (Ho, 2022, p. 21). Architectural form includes symbols, namely "architectural elements", symbolizing a specific architectural aesthetic and revealing the impact on the characteristics of urban spatial form. These concepts and principles have a direct impact on the design environment (Alnaim, 2021, p. 261).

With the increasing emphasis on environmental protection in society, people's demand for environmental protection and sustainable development has a huge impact on architecture, urban design and the built environment. This effect is not only reflected in the high efficiency and high-tech aspects of buildings, but also in the aesthetic expression of environmentally friendly design (Daugelaite; Huriye; Indre, 2021, p. 61). The existing research on architectural aesthetics mainly focuses on the two levels of "imagery" and "visual", but neglects the connection among "imagery", "visual" and "aesthetics", and also overlooks the role of "imagery architectural aesthetics" in "aesthetics" (Al-Saadi; Karbol; Almajidi, 2022, p. 69).

Architectural aesthetics, as an important aspect of architectural design, undertakes the artistic conception and formal beauty presented by the building. Parametric design is an innovative method in the field of modern architecture, which allows architects and designers to generate architectural elements and shapes according to various parameters and variables. This method provides more flexibility and creative space. However, at the same time, how to balance aesthetic elements with other factors needs to be carefully considered. One of the main advantages of digital design is its flexibility. It can automatically adapt and adjust the design according to the needs and space conditions of specific projects, so it is very useful for different types of buildings and uses. This adaptability can improve the practicability and efficiency of the building.

Today, with the increasing aesthetic requirements of modern architecture, more popular elements have emerged in modern architecture and have gained more favor. In modern architectural design, the organic combination of formal beauty, functional beauty and meaningful beauty can bring more innovation to modern architectural art. In the design of modern architecture, while ensuring the functional value of modern architecture, it is necessary to strengthen the design of architectural aesthetics, pay attention to the overall sensory effect and improve people's comfort in life, providing people with an aesthetic enjoyment, thereby reflecting the creativity of contemporary architectural design. On this basis, this article explores some issues related to formal beauty, functional beauty and meaningful beauty in current architectural aesthetics through the connection with modern architectural practice. It integrates and analyzes the three, providing some reference for future related scientific research work.

## 1 CONNOTATION OF ARCHITECTURAL AESTHETICS

Architectural aesthetics is an understanding of the human soul. Since the mid-20th century, people have conducted modern exploration of architectural aesthetics, which is a new science that gradually developed after injecting aesthetic elements into the scope of architecture. From a contemporary perspective, architecture is its focus. With the continuous improvement of people's living standards, science and technology, people's demand for quality of life is also increasing. Therefore, they are increasingly pursuing spiritual life's higher levels, and thus paying more and more attention to the aesthetic phenomena reflected in architecture. In various historical stages, the aesthetic connotations reflected are also inconsistent. Because everyone lives in different times, geographical locations and historical stages, their understanding of architecture can also vary greatly. Due to the times' development and the development of people's ideological consciousness, the aesthetic consciousness of architecture is also constantly changing.

Architectural aesthetics is reflected in daily life, and it is widely used in buildings, such as homestays, restaurants, hotels and gardens. It is loved by people because it integrates natural and human factors. "Architectural aesthetics" is not just a form of design, but an aesthetic understanding of objective things in nature (Yang, 2021, p. 45). China has a large number of cultural relics, as well as some national protected areas, parks and gardens, which can be continuously utilized. Based on a qualitative comparison of several Chinese gardens, it is believed that the planning and the construction of traditional and modern Chinese gardens follow the six sustainable garden planning concepts of "environment", "economy", "fairness", "beauty", "experience" and "ethics" (Liu; Wen, 2021, p. 689). Architectural aesthetic facade design generally refers to maintaining the original appearance while building new buildings behind it, and it points out the significance of opposing views for modern

architecture, especially for adjustable reuse (Plevoets, 2021, p. 541). In the ancient Chinese cities' architectural culture, ancient towers have a unique position in urban architecture, and architectural aesthetics has an impact on human survival and development (Soliyevich; Sidikov, 2021, p. 48).

The basic issue of architectural aesthetics is how to understand and handle the relationship between architecture and the environment in architectural activities, as well as how to handle the relationship between architecture and people (Li, 2023, p. 122). Many schools of thought have different views on these two issues. Both Western classical aesthetics, represented by ancient Greece, and ancient Chinese aesthetics consider the relationship between architecture and the environment with a human centered approach (SONG, 2018, p. 65).

In ancient Greece, people regarded humans as the leader of creation living between heaven and earth, and regarded nature and humans as a unity of opposites. This idea had a great impact on ancient Greek architects, who examined the relationship between architecture and the environment from a human centered perspective, emphasizing that architectural activities themselves were also aesthetic activities. The people-centered idea in Western classical aesthetics has had a profound impact on the history of modern architecture. (Cunningham, 2005, p. 109). In the 20th century, some Western architects still emphasized the subjective role of humans in their creations, such as the modern architect Mies Vanderro, who emphasized the need to express their individuality through their works and emphasized the use of decoration and materials to reflect their unique style.

In ancient Greek thought, human beings are usually regarded as a part of the nature and the universe's order, rather than the universe's center. Ancient Greek philosophers, such as Aristotle, emphasized the human beings' finiteness and relativity and placed them in a broader natural and cosmic order. This view emphasized respect for the nature's laws and objective reality. However, the Renaissance has brought a new ideological change, regarding human beings as the universe's center. This concept is embodied in art, literature and philosophy, and it is called anthropocentrism. Renaissance thinkers emphasized human dignity, creativity and free will, and put human beings at the center of thinking and creation. This view has promoted the development of modern culture and philosophy, and laid the foundation for the rise of modernity to some extent. Architecture is not only the creation of physical space, but also the reflection of cultural, historical, social and religious background. It carries unique stories and values, and it also affects people's lifestyle and cognition. In-depth study of architecture, in different regions and times, can help to better understand the human beings' diversity and commonalities.

In the 1950s, renowned architectural masters, such as Liang Sicheng, proposed the principle of "using less but refining" in architectural design. The contemporary Chinese

architecture industry also attaches great importance to the viewpoints and principles of “people-oriented”, “less is more” and “embodying beauty in truth” (Peng; Lee, 2018, p. 56). However, since the 1950s, with significant changes in society, economy, culture and other aspects, this people-centered ideology has begun to shake and change. Many architects have begun to emphasize the need to harmonize architecture with nature, adapt to society and integrate with culture. In architectural creation, it is manifested as continuous exploration of new materials, technologies, processes and structures. In design, emphasis is placed on putting people first and designing from the perspective of human needs. In construction, it is emphasized to adapt to local conditions and use local materials. In terms of management, emphasis is placed on modern management methods and innovative spirit.

## 2 FORMAL BEAUTY OF ARCHITECTURE

The beauty of architectural form, from both structural and scale perspectives, is a form of beauty. In architectural design, there are many different scales, such as plane scale, facade scale and different spatial scales (Zhao, 2022, p. 89). The overall design of the building should meet practical needs, and the building facade should meet the aesthetic sense of form and should meet the needs of various functions (Bazzaz; Mostaghni, 2019, p. 5).

In architecture, formal beauty is an aesthetic concept that arises from the analysis and induction of various formal elements. Applying the principle of formal beauty to architecture can achieve good results. In architectural creation, the principle of formal aesthetics should be followed. The principles of formal aesthetics vary among different types and uses of buildings, and these principles of formal aesthetics are inherently related. Formalism is a key concept in architectural aesthetics, which has a far-reaching impact on the appearance and modeling of buildings. Formalism is an aesthetic view that pays attention to the appearance and form of architecture. It emphasizes the visual effects of architecture, including lines, proportions, shapes and decorations. Formalism holds that the beauty of architecture lies in its exquisite and harmonious appearance. In architectural design, formalism is usually embodied in architectural modeling, facade design and decoration. Architects may pursue unique shapes, creative lines and well-designed decorations to create striking architectural works. Formalism architecture may emphasize symmetry, visual balance and aesthetic details.

The opposite of formalism is anti-formalism. Anti-formalism emphasizes the functionality and practicality of architecture and regards architecture as a purely functional container. In architectural aesthetics, there is constant debate and confrontation between formalism and anti-formalism. However, modern architecture often tries to combine the two and pursue both aesthetic and practical designs.

In modern architectural design, architectural designers need to comprehensively analyze the effectiveness of architectural design and various problems that may arise during the construction process, and appropriately design the area, color and other aspects of each part of the building to make the overall structure and function of the building more harmonious. The shape of a building has a direct impact on its own functionality and, only with certain materials, its own functionality can be better highlighted. Generally speaking, buildings can provide a good place for people to rest and exercise. For example, “home” is a place where people can feel at ease and enjoy life to the fullest. Therefore, in the process of construction supervision, it is necessary to link it with the category of the construction unit and conduct a comprehensive analysis of the construction unit.

The formal beauty of architecture varies among different countries, and Islamic architecture has certain common features and decorations in mosques, such as calligraphy, geometry and Arabic patterns. The aesthetic characteristics of Islamic architecture not only lie in architecture and decorative decorations, but also in beautiful philosophical values, such as the spirit of tolerance for diversity and peace, which are coordinated with their role in the social field, education and socio-economic development (Hendri, 2022, p. 79). In Iran, Malaysia, India, Turkey and other countries, architecture, which is characterized by environmental psychology and religious culture, has its unique formal beauty (Matracchi, 2021, p. 803). The principle of consistency between religious classification and architectural layout can be used to illustrate the most striking feature of Bolivia’s “emerging architecture”, which is the small house. As a form of architecture deeply rooted in the symbolic commodity economy, thatched cottage has the characteristic of “dual truth”: one is a physical object, and the other is a symbol. Its architecture possesses unique formal and artistic beauty (Poupeau, 2021, p. 164).

With the improvement of people’s living standards, their demand for spiritual civilization is also gradually increasing. They are no longer just satisfied with standard buildings, but pay more attention to the formal beauty of buildings. A good external and internal image can bring people a beautiful feeling, reflecting the creative characteristics of contemporary architecture. With the society’s progress, people begin to realize that architecture is not only a functional tool, but also an art form. The appearance, lines, proportions, colors and materials of buildings can convey beautiful information and stimulate people’s aesthetic feelings. Therefore, in contemporary architectural design, formal beauty has become an indispensable element. Architects should not only consider the practical use of buildings, but also pay attention to their appearance and design in order to create architectural works with artistic value and aesthetic feeling.

## **2.1 RELATIONSHIP BETWEEN PRACTICALITY AND FORM AND ITS APPLICATION IN MODERN ARCHITECTURE**

The design of modern architecture should combine formal beauty with practicality, emphasizing not only the practical value of the building itself, but also the external form of the building to meet human aesthetic requirements (Mao, 2019, p. 34). In architectural design, practicality plays a significant role, as it is premised on meeting the human life's needs to better meet the people's spiritual needs. In architectural design, it is important to focus on practicality, comprehensively analyze its structure and characteristics, and combine aesthetic requirements to create its external attributes, continuously improving its aesthetics and image.

## **2.2 PRACTICAL AESTHETICS AND FORMAL AESTHETICS IN MODERN ARCHITECTURE**

In the design of modern architecture, the concept of “people-centered” should be followed to meet the people's behavioral needs. The collaboration among specialties, such as water, electricity and heating, also requires vertical collaboration. The property management company reports the planning results to the designer, who provides a complete space and spirit for the building, while the interior and environmental designers provide a beautiful exterior for it. Correspondingly, its impact on buildings and their utilization status directly affect future commercial development. Secondly, design is a repetitive task that requires collaboration from different professions and stages. Due to its complex nature and the characteristic of “no benefit, no getting up early” for merchants, the developers' investment in shops constantly adjusts due to changes in the market environment, which is prone to the phenomenon of “repetition”. The planning of commercial formats should keep pace with the times. Due to various reasons, there have been changes in the customers who attract investment.

Currently, the biggest driving force for the design of commercial buildings is primarily developers. The developers' goal is to achieve better economic benefits through commercial construction projects. When obtaining a piece of land, a business format is determined in a very short period of time. However, in the early stages of planning, there are often shortcomings and immaturities, which often lead to three situations. The planning form does not match market requirements. During the planning process, it is found that the planning form does not meet market requirements and is “born without hope” in the future market. Therefore, significant adjustments can only be made while planning. The planned business approach needs to be consistent with market demand, but the scope of the plan does not meet the investment company's expectations, resulting in situations where both planning and adjusting the business approach happen, while investing and adjusting the

business approach. Some actions even result in disruptive business practices. The planned business format is consistent with the needs of the market.

These three situations all lead to repetitive work, consuming a large amount of funds, financial resources and manpower. Sometimes, it also occurs during design changes, and the design standards also change. The original coordination needs to be completely duplicated. Therefore, when building, the following issues need to be considered:

1. Attending on time: in the early stages of design and even planning, there are different professionals in various aspects who need to comprehensively consider market trends, commercial formats, space scale requirements, etc., during the planning process, and develop a comprehensive planning plan, as much as possible, to prevent wasting a large amount of manpower, material resources and financial resources.
2. Trying to shorten the development cycle, as much as possible, and reduce the intersection with the market: On the basis of sound planning, multiple parties collaborate to scientifically design and efficiently manage, in order to prevent a project from dragging on too long and conflicting with market demand.
3. Investments are made early to establish fixed requirements for different types of goods and spatial scales, and these requirements are reflected in the planning of buildings to reduce the probability of future changes.
4. The development process and responsibilities within the development process are reduced. Commercial buildings belong to a relatively complex type of architecture, which not only requires horizontal technological collaboration among various disciplines, but also requires vertical collaboration and management among different periods and groups. Only by doing a good job of horizontal and vertical collaboration can all work be carried out efficiently, and then commercial buildings can achieve their expectations and profits in a relatively short period of time. Architectural design combines practicality with formal beauty by highlighting the local ethnic characteristics to promote excellent cultural inheritance, and focuses on the design of ecological buildings to construct organic relationships in architecture.

### **2.3 APPLICATION OF FORMAL BEAUTY IN ARCHITECTURE**

In modern architectural design, the design concept of “people-oriented” should always be adhered to, in line with the human life’s real needs, and better reflect the formal and functional beauty of architectural design (Harvey, 2017, p. 133). From the perspective

of functional use, it is necessary to analyze its utilization value, while paying attention to its own physical and mental condition. Advanced design concepts, scientific technology, etc., can be used to achieve the design of buildings, so that while meeting people's needs for daily activities, more buildings with formal and functional beauty can be created.

Architecture is not only a practical tool, but also a cultural inheritance (Wei; Liu, 2022, p. 82). With the society's development, it also has a huge impact. In architectural design, it is important to not only inherit the beauty of its functions, but also organically combine various cultures and local ones to enrich the cultural connotation of the entire building. In different geographical environments, regions and cultural backgrounds, Chinese architectural art exhibits different developmental characteristics. When designing architecture, it is necessary to reflect its regional and cultural characteristics. While drawing on other advanced architectural design experiences, it is also necessary to continuously improve the comfort and functional value involved.

The purpose of historical building renovation is to focus on the modern society's development and carry out functional planning while retaining these buildings with certain historical value. Historical buildings use primitive bricks and tiles, which are a type of building material aimed at restoring the scenery and charm of Shikumen Hutong. At this point, its design and construction are based on maintaining the original appearance of the house. It is built based on the time's drawings and reflects the characteristics of traditional residential buildings. Not only it does give the new building a rich historical flavor, but it also highlights its beauty as a popular tourist destination.

In terms of indoor facilities, there are central air conditioning, automatic elevators, broadband internet access, etc., creating a brand new shopping space. The buildings above draw heavily from the style of Jiangnan residential buildings in terms of shape, with stone frames and thick black wood boards as doors, combined with the combination of Eastern and Western cultures, highlighting the characteristics of the building. On this basis, by organically combining traditional culture with national characteristics, the ones of contemporary architecture are reflected, in order to inherit traditional excellent culture and create architectural art with Chinese characteristics. Wusong Fort, a historical fort in Shanghai, was once a military facility in the Qing Dynasty and was transformed into a modern cultural center, including museums, art exhibitions and cultural activity spaces. The original city walls, forts and stone buildings have been preserved, making it a place for historical and cultural exchanges.

In modern architectural design, the concept of sustainable development should always be implemented, paying attention to both the aesthetics of the architectural design and the environmental characteristics in which it is located. It is integrated with the characteristics of the surrounding environment and continuously optimized. Modern architecture should

conduct in-depth analysis from aspects, such as energy conservation, environmental protection and sustainable development, and pay attention to establishing a new ecological environment. For example, by combining with natural elements, the use environment of buildings can be optimized in ecological, artistic and other ways to reduce adverse impacts on the surrounding environment.

The hidden dark grid, inside this house, is set up to allow air circulation. Ventilation holes are installed on the dome, ground and walls of the building to discharge indoor gases and introduce fresh outdoor air, thus providing natural ventilation. From the design drawings, it can be seen that this type of building is a tall tower higher than the main structure. Using a unique material can achieve long-term heat storage and release, allowing the entire room to remain warm in winter while also saving energy. Planting some green vegetation on its roof can also meet its aesthetic needs and play a cooling role, achieving the unity of architectural design aesthetics and functional beauty.

With the rapid development of contemporary construction, people have a higher level of demand for it. In modern architecture, attention should be paid to combining the functionality and formal aesthetics of the building, always implementing the “people-centered” thinking concept, and increasing exploration of ecological architecture. Ethnic elements, cultural elements and regional characteristic elements are appropriately integrated into it, reflecting the characteristics of Chinese architecture and achieving the goal of sustainable development.

### **3 FUNCTIONAL BEAUTY OF ARCHITECTURE**

Functional beauty refers to the ability of a building to meet people’s various needs and play a positive role in their material and spiritual lives during its use (Wang; Zhu; Wang, 2019, p. 9). Functional beauty includes two aspects: the first is the functional use of the building, and the second is the aesthetic function of architecture. Buildings can only achieve aesthetic value on the basis of meeting these functional requirements. Meanwhile, functional beauty is also a major aspect of architectural aesthetic value.

Architecture is people’s material needs and, as a material life’s part, it not only meets people’s basic material needs, but also has other functions (Han; Zhao, 2018, p. 104). Firstly, architecture is an important tool for human social interaction. As an important tool of human social communication, architecture plays a key role. Human beings are social animals, and social communication is a life’s important part. Buildings provide different types of social places, such as family houses, public squares, social clubs, restaurants, theaters and so on. These places provide opportunities for people to communicate with each other,

share experiences and establish interpersonal relationships, thus promoting social interaction and social contact.

Secondly, architecture is the main place for people to engage in cultural activities. As a social communication tool, architecture should first meet people's needs for cultural activities. Cultural activities refer to the creation and transmission of knowledge, ideas, values and other aspects by people in the cultural field. Cultural activities include various types, such as art, literature, sports, religion, etc. Once again, architecture is a spatial place with certain practical value in human production and life. In the development of human history, architecture has evolved from being a simple tool built solely for practical purposes to gradually becoming a social asset.

Architecture is not only a physical space, but also carries social and cultural functions. Architecture provides a place for people to communicate with each other and promotes social contact and cultural activities. It can be used to hold various cultural activities, such as art exhibitions, literature reading, sports competitions and religious ceremonies, thus enriching social and cultural life. Besides meeting people's cultural and social needs, architecture also has practical value. It provides people with the functions of production, work, storage and protection. This practicality makes architecture an indispensable resource in society.

#### **4 UNITY OF FORMAL BEAUTY, FUNCTIONAL BEAUTY AND MEANINGFUL BEAUTY IN ARCHITECTURE**

In architectural design, the scope of aesthetic connotation is very broad. Although the functions of buildings are complex and intricate, their fundamental role is still to utilize, which is to provide essential living and work for humanity. In modern society, architecture is built for people's lives and work. In terms of form, it must reflect people's life and work needs. In architectural design, some formal elements are always pursued, such as beauty, coordination, elegance and generosity (Jin, 2020, p. 173). Beauty refers to making people feel beautiful, joyful, and comfortable. Beauty is also determined by many other factors, such as beauty that can lift people's spirits and make them feel comfortable. This is because it has both practicality and some aesthetic significance. It has both practicality and artistry, and it is both a material beauty and a spiritual one.

Architecture is a product of human activities and a human life's part, and its quality is closely related to human life. The place where people live is a meaningful place, so there are high requirements for the quality of buildings. Human life is carried out in a certain space, which puts forward higher requirements for the quality of houses. Therefore, when selecting building materials, their safety, reliability and durability should be the primary considerations. When designing buildings, priority should be given to their technical

characteristics, such as firmness and stability. When decorating buildings, priority should be given to the characteristics of the used process, such as durability and decoration. When designing architectural forms, consideration should also be given to their aesthetic value.

The formal beauty of architecture is the foundation of architectural beauty, while the functional beauty of architecture is the core of architectural beauty. However, if the formal beauty and functional one in architecture are separated, the significance of architecture would be ignored, and the pursuit of formal beauty would be one-sided, leading to aesthetic fatigue. Therefore, while emphasizing the beauty of architectural form, special attention should be paid to the unity of function and meaning. In architectural aesthetics, the first thing to pay attention to is the unity of “form” and “function”. Due to historical and social reasons, ancient architecture often prioritizes the form of the building as the primary consideration, even placing it above other factors, while neglecting its social and functional significance.

The design ideas of ancient Chinese architecture are mainly concentrated in two aspects: the first is the ritual ideology centered on Confucianism, and the second is the inaction ideology centered on Taoism. Among them, the two most influential and representative theories are the Confucian “ritual system” and the Taoist “inaction” ideology. Both of these ideas believe that “propriety” is closely related to “law”, “virtue”, “reason”, etc. Only by organically combining the two, a highly unified, orderly and stable social order can be established. This aesthetic ideology of ancient Chinese architecture, represented by Confucianism and Taoism, provides basic guiding principles for the creation of ancient Chinese architecture. As an important place for human living and social activities, architecture should first have aesthetic value. However, beauty does not exist in isolation. It is always associated with a certain function.

Under Confucianism, etiquette is regarded as an important part of social order and moral norms. Architecture plays an important role in social life, reflecting the influence of Confucian etiquette and social norms. Confucian architecture usually emphasizes social order and hierarchy. For example, the layout and architectural structure of ancient palaces often reflect the status difference between monarchs and subjects. The symmetry of architecture and the design of etiquette space are the embodiment of etiquette thought. Confucianism emphasizes the importance of education. The architectural design of some ancient universities and academies reflects the Confucian educational concept and provides an environment suitable for learning and thinking.

## CONCLUSIONS

As a cultural phenomenon, the evolution of architecture is closely related to the times' changes, and people's understanding of architectural aesthetics is constantly evolving

with the society's development. With the society's constant change, the role and function of architecture are constantly expanding and redefining. Therefore, it is very important for modern architects to have a unique perspective and rich imagination to meet the contemporary society's diverse needs.

Through in-depth analysis of three important aspects of architectural aesthetics, namely, the beauty of form, the beauty of function and the beauty of meaning, this paper aimed to reveal the relationship between them and how to jointly build unforgettable architectural works. The application of formal beauty in architecture is not only visual pleasure, but also reflects the perfect integration of architecture structure and proportion, as well as the exquisite skills of material selection and treatment. Functional beauty emphasizes that architecture is not only a static structure, but also a dynamic living space, which must meet people's needs and provide positive life experience. Meaningful beauty gives architecture a deeper symbolic meaning, reflects social and cultural values, and makes architecture a carrier of history and culture.

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