




From Architectural Image to Design Intention: A Study of Architectural Art Design

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Citation: Jin, J. (2024). From Architectural Image to Design Intention: A Study of Architectural Art Design. *Mediterranean Archaeology and Archaeometry*, 24(1), 26-38. [10.5281/zenodo.10730900](https://doi.org/10.5281/zenodo.10730900)

ARTICLE INFO

Received: 16 Sep 2023

Accepted: 20 Dec 2023

ABSTRACT

This paper aims to deeply study the close relationship between architectural image and design intention in the field of architectural art design. Through an in-depth analysis of architectural works from different periods and styles throughout history, we will explore the key role that architectural images play in how they convey the designer's deep intentions, and how they shape the viewer's perceptions and emotions. This paper will make full use of examples to elaborate on how architectural images convey and embody designers' unique ideas and creativity through ingenious visual elements, unique spatial layouts and symbolic symbols. At the same time, we will also study how the audience can gain a deeper understanding and experience of the architectural works through the interpretation of these images. Through this study, we can more thoroughly understand the creative thinking process behind architectural art design, as well as the rich cultural value it contains. Since ancient times, architectural works have not only been practical structures but also carriers of culture, history and human thought. The discussion of this paper will help to reveal the profound meaning behind the architectural images, so as to provide a more comprehensive perspective for us to understand and interpret the multiple levels of architectural art. Finally, this research is expected to provide far-reaching implications for future architectural design and cultural research and promote the continuous innovation and development of the field of architectural art design.

Keywords: Architectural Image, Design Intention, Spatial Layout, Emotional Impact, Cultural Value, Audience Experience.

INTRODUCTION

As we all know, architectural art design not only realizes functional needs but also pursues beauty, uniqueness and harmonious symbiosis with the surrounding environment. Historical architectural works show us the architectural artistic style in different periods, regions and cultural backgrounds, and it is the architectural image that plays a key role in conveying the design intention. From the pyramids of ancient Egypt to the colonnades of ancient Greece to the modern skyscraper, every building conveys a designer's unique understanding of function, aesthetics and culture in its external form and internal structure (Banham, 1980).

With the development of human society, architectural art design is no longer limited to meeting basic survival needs, but more and more emphasis on the expression of emotions, values and aesthetics in space. Architectural images, as the medium of design intention, play an indispensable role in connecting the designer's creativity with the audience's perception (Trubiano, 2013). Architectural images are not only the "appearance" of architectural works, but also the symbol of designers' thoughts and emotions, and the concrete visual presentation of design intentions. Therefore, an in-depth study of the relationship between architectural images and design intentions will not only help to better understand the connotation of architectural works but also help to explore the way of thinking and cultural background of designers in the creation process (Frampton, 1992).

The main purpose of this study is to explore the relationship between architectural image and design intention and reveal the role of image in conveying a designer's intention, cultural value and aesthetic emotion.

On this basis, we will analyze architectural works of different historical periods and styles, and explore how their design intentions are conveyed to the audience through visual elements and symbols, thus affecting the audience's perception and emotional experience.

In order to achieve the above goals, this study will adopt a comprehensive research method. First, we will conduct a literature review and review the existing research results on architectural art design, image communication and intention interpretation. Secondly, we will analyze the relationship between architectural image and design intention from visual culture, semiotics and perceptual psychology. Finally, we will use case studies to delve into specific architectural works, exploring how they convey design intent at different levels and how they are interpreted by the audience.

DISCUSSES THE RELATIONSHIP BETWEEN ARCHITECTURAL IMAGE AND DESIGN INTENTION

Multi-dimension of Architectural Art Design

Architectural art design is far more than the construction of a practical building, it is also a communication of ideas and emotions (Figure 1). The aesthetics, cultural background and social values of designers are hidden behind different architectural works. For example, Gothic architecture emphasizes the sense of vertical, implying the spiritual pursuit of upward, while modernist architecture focuses on functionality and simplicity, reflecting the characteristics of industrial society.

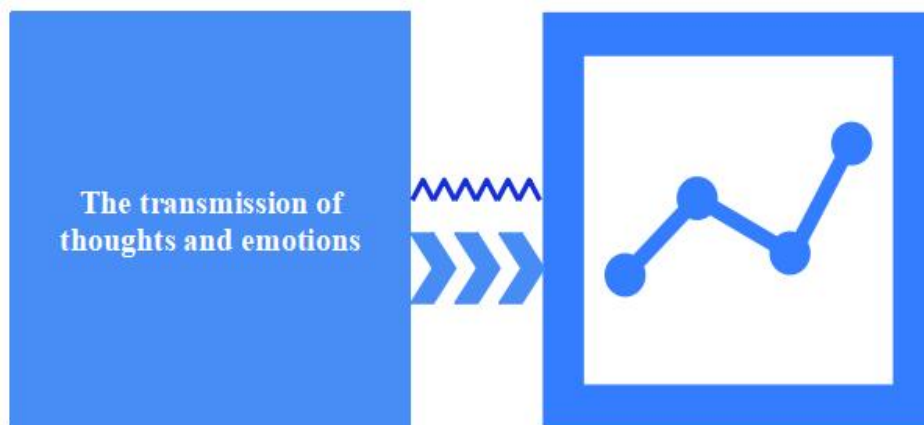


Figure 1. Thought and Emotion Transmission

The multi-dimensional nature of the building is also reflected in the physical structure, as shown in Figure 2. Different levels of its physics show different effects, and the impact is also different, so the physical and emotional are connected.

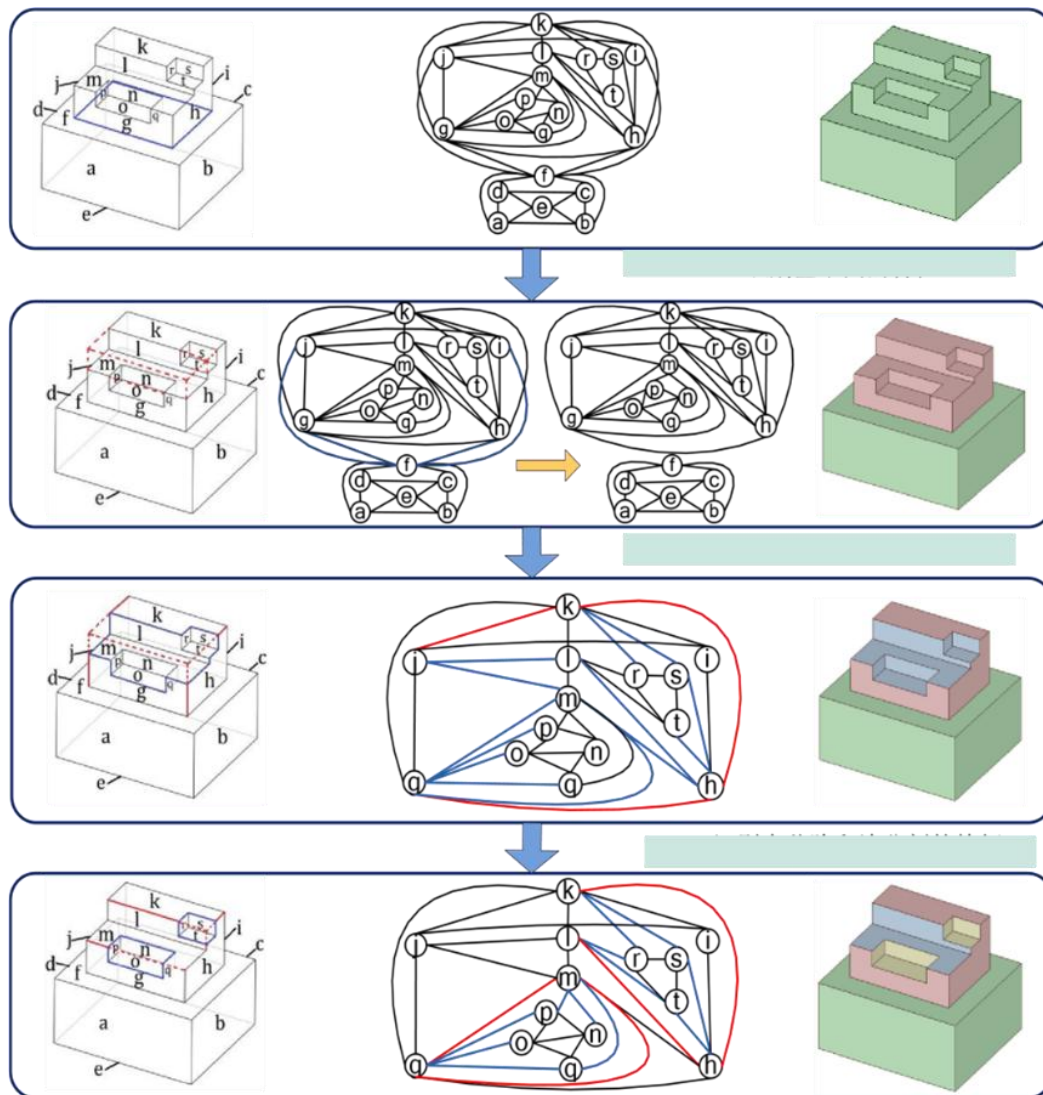


Figure 2. Physical Multi-dimensionality of Building (Nawaz, Su, & Nasir, 2021; Nawaz, Chen, Su, & Zahid Hassan, 2022)

Visual Communication and Perception

The appearance and form of buildings affect people's perception and emotional experience to a great extent. For example, curved and curved buildings may make people feel soft and intimate, while sharp corners may produce feelings of tension and oppression. At the same time, the proportion of the building is also an important means of visual communication, and by controlling the scale relationship, the designer can create different spatial atmospheres.

Symbols and Symbolic Meanings

Symbols and symbolism are often incorporated into architecture, and these symbols can come from different cultures, religions, and philosophical systems (Figure 3). For example, the pillars of Greek temples represent strength and order, while the lotus form in Buddhist temples symbolizes purity and transcendence. These symbols are not only decorative but also a bridge between architecture and culture, through which architecture can convey deeper meanings and values.

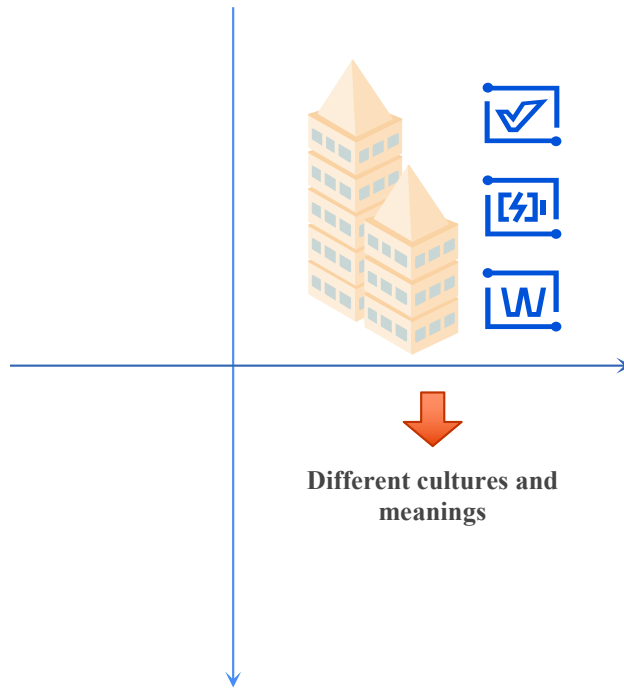


Figure 3. Meaning Symbol

Narrative of Architectural Works

As a carrier of space, architecture is often used to tell a story or convey an emotion. Through the layout and flow of Spaces, buildings can guide people to produce specific emotional experiences within them (Figure 4). For example, the spatial layout of museums often guides the audience to visit according to a certain narrative logic through the connection of exhibition halls, so as to better understand the historical stories conveyed by the exhibits.

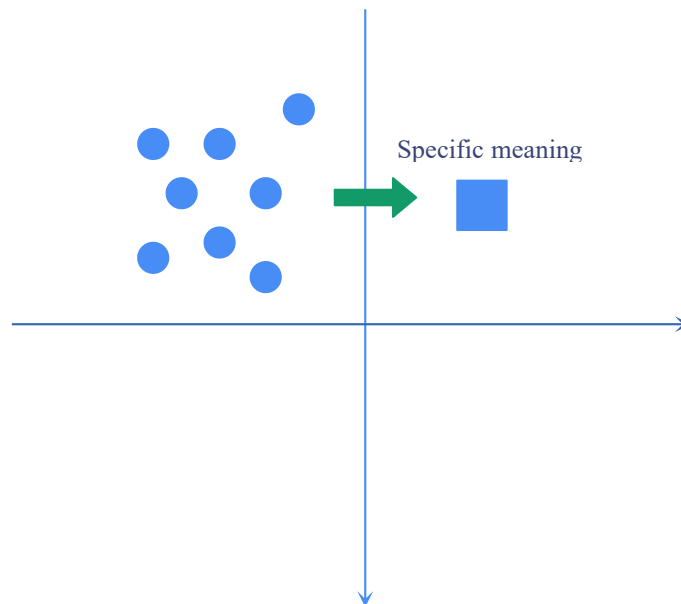


Figure 4. Narrative of Architectural Works

PRESENTS THE DESIGN INTENTION OF ARCHITECTURAL WORKS IN HISTORICAL PERIOD

Ancient Greek and Roman Architecture

The ancient Greek and Roman civilizations had a profound influence on the art of architecture. Ancient Greek architecture focused on proportion and harmony, and demonstrated the pursuit of human proportions through column structure and facade design (Goldberger, 2005; Hadid & Jodidio, 2013; Jodidio & Hadid, 2020). The

Parthenon is a classic example, whose multi-columnar facade not only creates visual balance but also represents the sacredness and order in ancient Greek culture (Figure 5).

Ancient Roman architecture innovated on the basis of ancient Greece, emphasizing grand public architecture and practicality. The Colosseum is one of the masterpieces of ancient Roman architecture, with its oval-shaped plan and huge stands reflecting the power and majesty of ancient Roman society (Hertzberger, 2000; Lu, 2023). These architectural works communicate different political and cultural intentions through form and function.

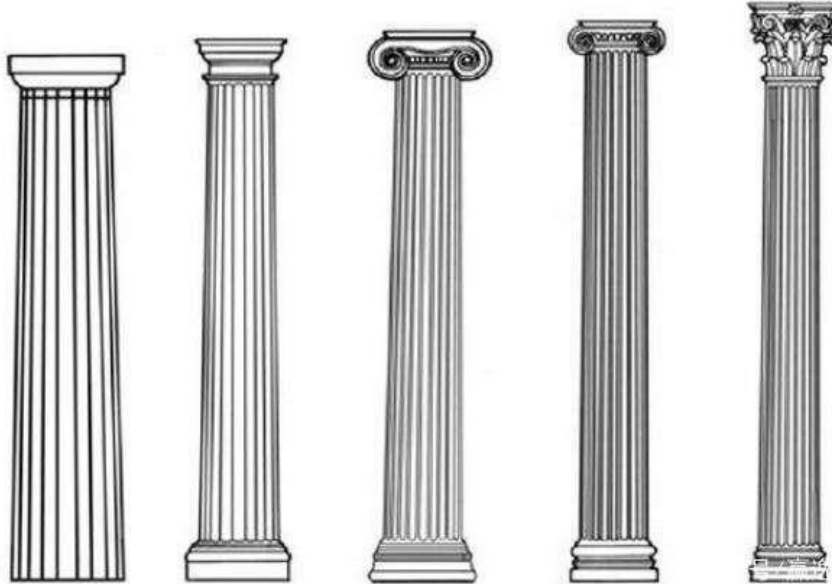


Figure 5. Ancient Greek and Roman Architecture

Renaissance and Baroque Architecture

During the Renaissance, architects returned to the ideas of ancient Greece and Rome, seeking the perfection of symmetry and proportion. St. Peter's Basilica is an outstanding example of Renaissance architecture, with its dome and colonnade embodying a tribute to ancient architecture (Frampton, 1992; Holl, 1994; Jencks, 1997). This architectural style aims to express the human quest for knowledge and beauty (Figure 6). In addition, it involves a more complex edge design, and a better edge design can realize this building, and its design principle diagram is shown in Figure 7.

Baroque architecture emphasizes dynamics and drama, creating gorgeous visual effects through decorative elements such as curves and sculpture. The Palace of Versailles is a masterpiece of Baroque architecture, with its grand palaces and gardens reflecting the power and glory of the Kings of France. These architectural works convey a passion for luxury and expression through decoration and styling.



Figure 6. Renaissance and Baroque Architecture

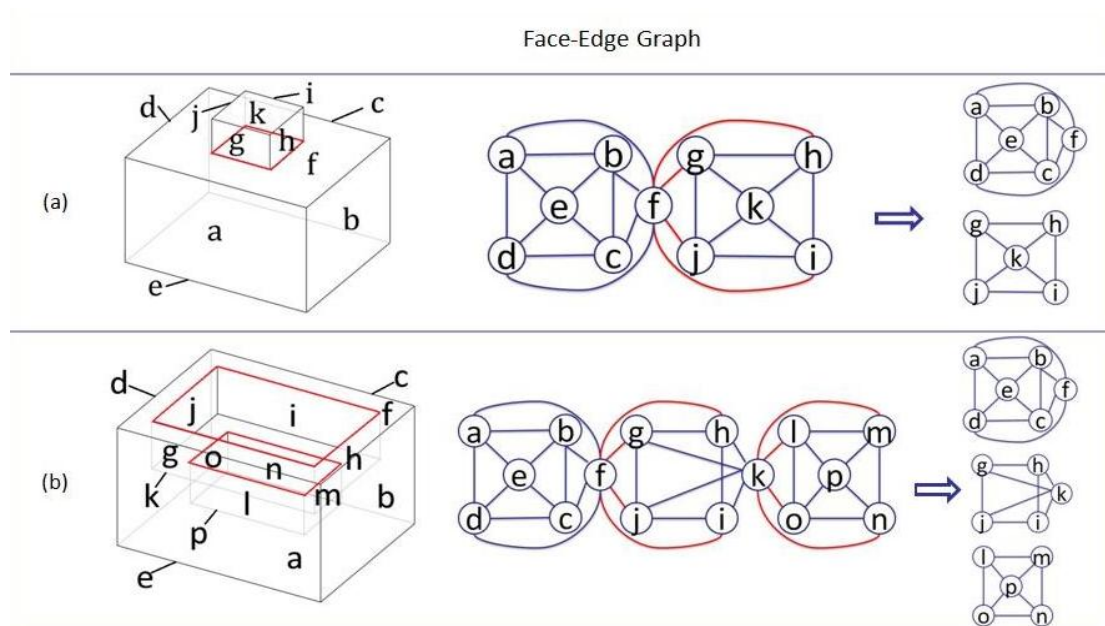


Figure 7. Edge Feature Design Diagram (Maqsoom et al., 2021)

Modernism and Postmodernism Architecture

20th century modernist architecture emphasized functionality and simplicity, rejecting excessive decoration in favor of pure form and space. Works by Brazilian architect Oscar Niemeyer, such as the Brasilia House, exhibit modernist characteristics, integrating interior and exterior spaces and focusing on integration with the natural environment (Corbusier, 2013; Jencks & Kropf, 2006; Norberg-Schulz, 1979).

Postmodernist architecture breaks through the limits of modernism and focuses on individuality and diversity. The Pompidou National Centre for Art and Culture in France embodies the characteristics of postmodernism, and its intricate appearance and spatial layout convey multiple meanings and interpretations (Pallasmaa, 2005; Rowe & Koetter, 1983). These architectural works express the rethinking and challenge of traditional norms through form and structure.

EFFECTS OF VISUAL ELEMENTS AND SPATIAL LAYOUT

Relationship Between Form and Space

The form and spatial layout of architecture directly affect people's visual perception and emotional experience. Different forms, such as straight lines, curves, angles, etc., will produce different visual effects. At the same time, the layout of the space, such as open, closed and smooth, will also affect people's walking and feeling in it. Through careful form and layout, designers create a specific space atmosphere and guide people to produce a specific emotional response.

Color and Emotion

Color is one of the important visual elements in architecture, which not only affects the appearance but also affects the emotional transmission. Warm colors such as red and yellow are often used to convey enthusiasm and energy, while cool colors such as blue and green convey calm and serenity. Through the choice and combination of colors, designers can adjust people's emotional state in the building, creating a warm, lively, calm and other different atmosphere.

Material and Texture

The choice of building materials affects not only the appearance of the building but also the tactile and visual experience. Wood, stone, metal and other materials have different textures and expressions. For example, the warmth and rusticity of wood can create an intimate atmosphere, while the modernity and coolness of metal convey technological and industrial characteristics. Through the use of materials, the designer organically combines texture and emotion into the architecture.

AUDIENCE PERCEPTION AND EMOTIONAL EXPERIENCE

Emotional Transmission of Architectural Images

Architectural images are not only the presentation of form and structure but also the transmission of emotion and meaning. In architectural design, designers create an emotional atmosphere that resonates with the audience through various visual elements, material choices and spatial layouts (Venturi, Scott Brown, & Izenour, 1977). The use of visual elements such as lines, shapes, colors and textures in architectural images can arouse the visual perception of the audience and trigger emotional resonance. For example, curvy lines and soft tones often create a warm, subdued atmosphere, while straight lines and bright colors may convey a modern, precise sensibility. In addition, the choice of materials can also create specific emotional experiences through the combination of touch and sight, such as the warmth of wood and the coldness of metal.

Audience's Interaction with the Building

Architectural art design is not an isolated existence, but a process of interaction with the audience. The viewing angle, distance and the experience of entering the building will affect the perception of the architectural work. For example, when viewing a building, the viewer may choose different angles in order to get a more comprehensive visual experience (Norberg-Schulz, 1979). Architects often consider the viewer's visual path and guide them to gradually reveal different parts of the building, thereby creating a sense of sequence that makes the viewer's experience richer and more engaging.

The interaction between the viewer and the building can also be achieved through tactile and aural experiences. Touching the texture of the building materials and hearing footsteps echoing through the space will leave a deep impression on the audience. This multi-sensory experience strengthens the audience's emotional engagement with the building, allowing them to interact more closely with the work.

Aesthetic Experience and Aesthetic Emotion

Architectural art design not only meets people's needs functionally, but also brings pleasure and inspiration to the audience aesthetically. The audience generates an aesthetic experience by perceiving the aesthetic elements of the building, such as proportion, symmetry, balance, etc. The experience transcends functionality and becomes an expression of emotion. Aesthetic experience is not only a preference for the appearance, but also an understanding of the meaning and cultural connotation behind the building. For example, an old church may inspire awe with its majestic arches and frescoes, while a modern art gallery may inspire creative thinking with its avant-garde form and unique spatial experience.

Aesthetic feelings can also be influenced by the audience's background and culture. People from different cultural backgrounds may have different emotional experiences of the same building. Therefore, architectural art design needs to consider the diversified aesthetic needs of the audience in order to create a more inclusive and rich emotional experience.

Difference between the Impact of Architectural Images and Actual Architectural Experience

Although architectural images can convey design intent and elicit emotional experiences, the actual architectural experience is often different from what the images present. The image is only a representation of the building, while the actual experience involves the flow of space, the change of light, and the participation of touch. The audience may encounter different perspectives and feelings from the images in the real architectural space. Therefore, designers need to consider how to convey emotion in the image, but also fully consider the experience of the audience in the actual space, to ensure that the image is consistent with the actual experience.

CASE STUDY: ARCHITECTURAL IMAGES AND DESIGN INTENTIONS IN DIFFERENT STYLES

When it comes to the relationship between architectural image and design intention, case analysis is the key to a deeper understanding of this relationship. Chapter 6 will explore how architectural images convey the designer's intention and affect the viewer's perception and emotion through specific cases from different architectural styles. These cases will represent different historical periods and styles, thus showing the diversity and complexity of architectural art design.

Gothic Churches and Religious Feelings

As one of the outstanding architectural styles in medieval Europe, the Gothic church has left a deep mark in architectural history. Take Notre Dame Cathedral in Paris as an example, its architectural images directly convey religious feelings and beliefs. These churches convey a sense of connection to the mystical world with their soaring

spires, exquisitely carved flowered glass windows and intricate flying arch structures. Buildings of this period made extensive use of flying buttresses and pointed arches, as shown in Figure 8.



Figure 8. Gothic Churches and Religious Feelings

The spires of Gothic buildings stretch upward as if to lead to God's heaven, while the flowered glass windows convey religious stories and mysteries through a variety of colors and patterns. These visual elements are not only part of the structure, but also a symbol of the architect's praise and reverence for God. Through its unique form, architectural images directly convey the designer's religious intention to the audience, making them feel a transcendent existence in the space.

Architectural images of Gothic churches also express religious sentiments through the sculptural and decorative elements on their facades. For example, the west facade of Notre Dame Cathedral has hundreds of statues depicting characters and episodes from biblical stories. These sculptures are not only works of art but also visual representations of the Christian faith. In the face of these sculptures, the audience not only appreciates the beauty of art but also feels the power of religious feelings.

Modernist Skyscrapers and Functionalism

In the early 20th century, modernist architecture rose and skyscrapers became the symbol of city skylines. As a typical case, the Empire State Building in New York embodies functionalism in its architectural image. The appearance of a skyscraper directly reflects its internal structure and use, and form and function are closely integrated. This image conveys the modern emphasis on efficiency and practicality, as well as the progress of technology and industry. Through the appearance of the skyscraper, the audience can intuitively understand its internal space layout and feel the vitality and rhythm of modern urban life.

Postmodern Museums and Expressionism

Postmodernist architecture rose in reflection on modernism, emphasizing emotion, expression, and diversity. For example, Frank Gehry's Guggenheim Museum is an example of postmodern architecture (Figure 9). Architectural images, through their distorted forms and irregular structures, convey the designer's unique understanding of art and culture. This expressive style makes the building itself a work of art, evoking the viewer's emotions through its images and forms. The design of the museum itself is a kind of display, where the architectural image is not only a tool to convey the intention but also a part of the work.



Figure 9. Frank Gehry's Guggenheim Museum

Nordic Modernist House and Nature Integration

In the 20th century, modernist architecture in Northern Europe focused on blending with the natural environment. Examples of houses designed by Finland's Alvar Aalto, such as the Finnish People's House, embody the idea of being close to nature. The architectural image blends the interior with the exterior through large glazing areas, allowing the occupants to experience natural light, seasonal changes and the beauty of the natural landscape. This image conveys the designer's concern for ecological balance and a comfortable living environment but also expresses the unique Nordic region of natural and human harmony.

Contemporary Urban Renewal and Social Inclusion

In the practice of contemporary urban renewal, architectural images play an important role in guiding social inclusion. For example, the Rocca Park Community project in Rio de Janeiro, Brazil, created a more livable environment by reconstructing the buildings of the favelas. The architectural image here is not only to show the appearance of the new building but also to convey to the residents of the community the concern for their quality of life. This image conveys the cooperative relationship between designers and residents, establishing social connections, and also reflects the pursuit of social equality and inclusion in urban renewal.

Through in-depth analysis of these cases, we can see how architectural images convey design intent, shape the audience's emotional experience, and play an important role in society under different styles, historical periods, and cultural backgrounds. Architectural image is not only a visual display but also a carrier of culture, history, society and emotion. Through architectural images, designers convey their creativity and intention to the audience and guide the audience to have a deeper understanding and thinking of the architectural works.

To sum up, the relationship between architectural image and design intention is complex and rich, which covers multiple dimensions such as culture, history, society and emotion. Through case studies, we can better understand how architectural images convey designers' intentions in different contexts, and how they affect viewers' perceptions and emotions. This relationship not only exists at the visual level but also is an important part of the interaction between architectural art and human civilization. Therefore, when designing and creating architectural images, it is necessary to think deeply about how to most accurately convey the design intention and how to effectively communicate with the audience, so as to achieve a richer and more profound architectural experience.

CULTURAL VALUE AND FUTURE PROSPECTS OF ARCHITECTURAL ART DESIGN

When talking about the cultural value and future prospect of architectural art design, we must realize that architecture is not only a practical structure, but also the carrier of culture and the mirror of society. Architecture, as a comprehensive art, not only pursues functionality and aesthetics but also reflects the values, cultural identity and social emotions of The Times. In this chapter, we will explore the cultural value of architectural art and design

and how to envision its future development in a changing social environment.

Cultural Inheritance and Contemporary Innovation

As a part of culture, architectural art design plays an important role in cultural inheritance. Architectural styles and design languages of different historical periods and regions carry specific cultural information. Ancient palaces, temples and castles reveal the power structure and religious beliefs of the society at that time; The architecture of the Renaissance shows the idea of humanism and human's pursuit of knowledge. Modernist architecture reflects the ideas of industrialization and functionalism (Hadid & Jodidio, 2013; Lu, 2023; Milojković & Nikolić, 2012). These historical traces are still reflected in contemporary architecture, as the continuation and inheritance of culture.

However, cultural inheritance is not equivalent to simple imitation of the past but should be combined with contemporary innovation. In today's rapidly changing social environment, architectural art design needs to find ways to keep pace with The Times to convey cultural values. This may involve a reinterpretation of traditional architectural elements, blending them with modern techniques and materials to create architectural works that are both culturally distinctive and adapted to modern needs. This kind of innovation is not only formal but also ideological, requiring designers to embrace changes and seek breakthroughs on the basis of respecting traditions (Figure 10 & Figure 11).

Inheritance and innovation on the basis of tradition

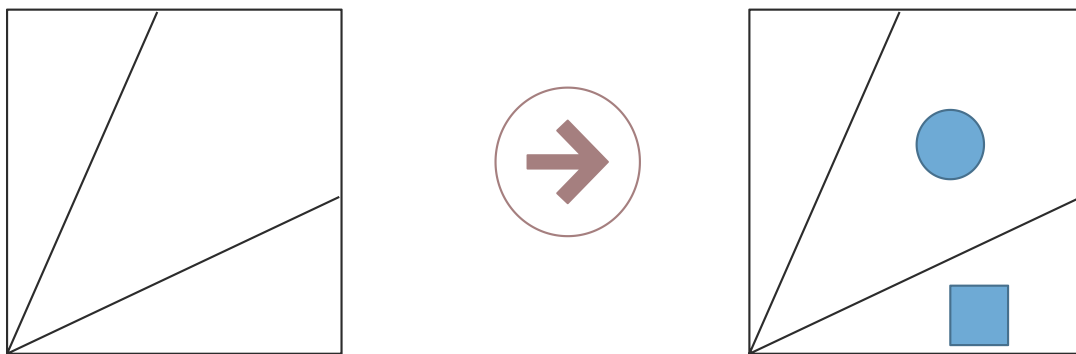


Figure 10. Cultural Inheritance and Contemporary Innovation

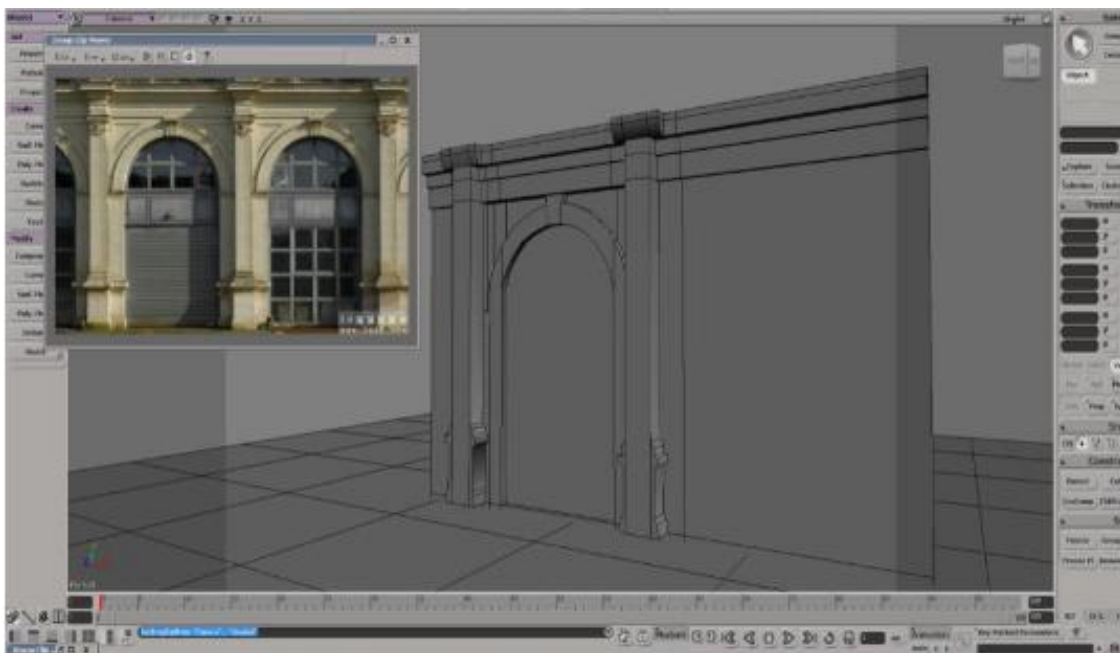


Figure 11. Three-dimensional Architectural Design

Reconstruction of Architectural Images in the Digital Age

With the rapid development of science and technology, digital technology has deeply affected all aspects of architectural art design. The way in which architectural images are created, transmitted and interpreted has changed dramatically. In the past, architectural images were mainly expressed through painting, photography, and modeling, but now, Virtual Reality (VR), Augmented Reality (AR) and other technologies bring people a more immersive experience (Ali et al., 2020). People can walk into unbuilt buildings through virtual reality technology to feel the atmosphere and layout of the space; Augmented reality technology can overlay virtual information on the actual environment to help people better understand the design intent of the building.

This reshaping of the digital age also brings more possibilities for the creation of architectural images. Architects can use computer-aided design software to make more precise designs and create architectural works with diverse forms and complex structures. At the same time, digital technology also promotes the integration of architectural art with other art forms, such as digital art, interactive installation, etc., giving architecture more levels of expression (Lu, 2023).

However, the application of digital technology also brings some challenges. Over-reliance on technology can lead to creative limitations in the design process, making buildings one-dimensional and standardized. In addition, digital architectural images weaken people's perception of the actual architectural space to a certain extent, which may affect the audience's real experience. Therefore, in the digital age, architectural art design still needs to maintain a balance, giving full play to the advantages of technology, while focusing on human perception and emotional experience.

Impact of Design Intention on Future Society

Architectural art design is not only the pursuit of formal beauty but also a response and guidance to society. With the global social, environmental and economic changes, architecture will play a more important role in the future. Designers need to think about how to promote the sustainable development of society through architectural art and create a more humane, environmentally friendly and inclusive built environment.

For example, with the acceleration of urbanization, designers need to pay attention to the planning and design of urban space and create urban public space that is convenient for people to communicate and activities. In terms of environmental protection, architects can reduce energy consumption and carbon emissions by designing green buildings and utilizing renewable energy sources. In terms of social inclusion, buildings can be designed to accommodate the needs of different groups, including the elderly, the disabled and so on.

In addition, architectural art and design also help to convey the values and emotions of society. For example, in the face of social problems, architecture can be designed as a symbolic work that triggers people to think about and pay attention to the problem. Architecture can also be a witness to history, recording social changes and the flow of emotions. Therefore, designers need to think about how to convey specific messages and emotions through architecture and trigger the audience's resonance and thinking. This may involve the choice of form, materials, colors, etc. of the building, as well as the relationship of the building to its surroundings.

CONCLUSION AND PROSPECT

Research Summary

Through the in-depth study of the relationship between architectural image and design intention, this paper reveals the multi-dimension and complexity of architectural art design. We delve into architectural works from different historical periods and styles and analyze the importance of architectural images in conveying designers' intentions. From visual elements and spatial layout to symbols and symbolism, architectural images convey the ideas, cultural values and emotions of designers in many ways. We also focus on the role of the viewer, exploring how they gain a deep understanding of the architectural images and how the works of architecture affect them aesthetically, emotionally and culturally.

Further Research Direction

Although this paper has deeply explored the relationship between architectural image and design intention, there are still many unexplored areas worthy of further research. Future research can focus on the following directions.

1. Technology and digital impact: As technology continues to evolve, digital tools are having a profound impact on architectural design and image presentation. Future research could explore how digital technologies have changed the way architectural images are communicated, and how these technologies affect the expression of design intent and viewer perception.

2. **Social and environmental impact:** Architectural design is closely related to the environmental and social context. Future research could explore how architectural works communicate different design intentions in different social and environmental contexts, and how architectural images are understood and interpreted in different cultures.

3. **Psychology and perception Studies:** Further research can delve into the viewer's perception and emotional experience of architectural images. With the help of psychological and perceptual research methods, it is possible to more accurately analyze how architectural images affect viewers' emotions and cognition.

4. **Contemporary innovation and sustainability:** With the rise of sustainability, building design is increasingly focused on environmental protection and social responsibility. Future research could examine how contemporary architectural works communicate sustainability and innovation through images.

ACKNOWLEDGEMENTS

1. Key Scientific Research Project of Jilin Provincial Department of Education, Research on the Construction Path of Smart Aesthetic Education in Colleges and Universities under the Background of Virtual Technology, (JJKH20240256SK)

2. General topics of the Jilin Higher Education Association, Case Study of Universities serving Rural Aesthetic Education in Jilin Province from the perspective of "Double Reduction" policy, (JGJX2023D415)

CONFLICT OF INTEREST

The author promises that the manuscript is free of any financial conflict of interest.

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