Comparison Analysis on Architectural Culture in China and Western Countries

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Abstract. Architecture culture is the synthesis of material possession and spiritual wealth, created by human society history development and reflects historic continuity and nationality character. This paper has a comprehensive comparison analysis on distinctions of originality, architecture characteristic, developing logic, art forms, and intention between China and Western Countries exhibited on architectural culture, including three parts: ancient period, current period, and future development. Through comparison studies, it presents a comprehensive cognition on different cultural backgrounds and unique exhibition forms for different architectural styles on China and Western Countries; have a deeper understanding on architectural culture communion in two different civilization zones; and find a future developing way with ethical features and spirit for Chinese and Western architecture.

Key words: Culture, Architecture, China, Western Courtiers, Urban

INTRODUCTION

Architectural culture is the synthesis of material possession and spiritual wealth, created by human society history development and reflects historic continuity and nationality character. It is the historical accumulation of human civilization, involved with science, art, religion, law, moral, custom, and so on. Architecture is inextricably linked to space and time, and is part of daily life. It is a cultural practice that is within a system of circulation and reception (Kai 21). Architecture is influenced by the particular history and backgrounds of its setting and by the economic laws of contemporary urban development, but also by the fluctuation of international financial markets, by the representational necessities of states, and by each nation’s policies controlling the supply and demands of jobs. However, both the practice and the theory of architecture are neither static nor codified for all times, but change in relation to the tradition of its discipline and to the contemporary pressures of society.
The form of architectural culture is a multilevel and interacted organic structural system. This system exhibits that architecture as the mix of history culture, local culture, natural environment culture, political moral ethics, and engineering technological culture forms a type of multidimensional cooperated resonance, focusing on humanism of architecture (Wang and Zhang 27). The field of architecture embodies and at the same time describes technology, culture, and the most evasive aspect perceived by people, meaning. As a result, places and buildings have come to be symbolic of the relationship man has with the environment both philosophically and technically. Architecture is a mix product of material and moral civilization which represents a type of culture and a significant part of culture (Yuan and Cao 38). I believe that the cultural value of architecture is its social value. The style of architecture is a kind of reflection for social life style, life level, and life spice. Architecture is the neurons of the whole cultural neural network system and the cell of local cultural style. Architectural culture is belonging to local cultural style. Architecture could express its excellent cultural taste until keeping consanguineous relation with its maternal body (local cultural style). The ultimate goal for architecture has a great influence on the value judgment for architectural culture. Architecture should be aimed to serve human beings, so the value judgment for architectural culture becomes the judgment for human physiological and psychological value evaluation in function and culture. The development trends for architectural culture should be Global, Ecological, Diversity, and Localization.

Architectural history has the potential to engage more fully in the historical and critical analysis of the cultures in which the objects of its study reside, indeed in advancing the understanding of architecture as an integral component of human existence – personal, social, spiritual, and metaphysical. And it is also the social aspect that acknowledges the human condition and our different cultures that seem to be missing in a lot of architecture that gets built today. In fact, the process has become reversed. More attention is paid to the economy and efficiency of building envelop than designing architecture for specific people (Lihia 69). Architecture in this sense continues the practices of the society. City design should also be an image of the society, so in the process, portray and design for the city has to suit the society and give a clear image of the societal image. Distinctions of originality, architecture characteristic, developing logic, art forms, and intention between China and Western Countries should be exhibited on architectural culture. These distinctions are based on different cultural soils: different backgrounds of regional culture and nationality.
characteristics. My research topic addresses Comparison Analysis on architectural culture in China and Western Countries and keywords include Architectural culture, China and Western Countries, Connotation, and Civilization.

This paper has comprehensive aspects for comparison analysis and experienced a great span for time and space. It is based on Architecture and Urban Design as the center for having research. This paper is divided by three parts: ancient period, current period, and future development, but it focuses on current period analysis.

BACKGROUND STATEMENT

Architects over the ages have had an impact on civilization, not simply by what they build but by how they interpret the philosophy of the time (Glanville 179). I set China as one side and Western Countries as another side based on different civilization. Some people say that conflicts in 20th Century is from ideology: socialism and capitalism. In this century, I believe we should use Civilization-Zone Model for dividing the world: Western country civilization zoning (Europe, U.S., Canada, and Australia), Confucian civilization zoning (China, Japan, and Korea), Islamic civilization zoning, and so on. Generally, there is a strong contrast two civilizations in the inner forces: such as religious beliefs and philosophic thoughts. Like architecture, the Chinese way of thinking seems to be the antithesis of the western concept of philosophy itself. This study attempts to demonstrate strong contrast from one type of architectural culture (China) to another type of architectural culture (West Countries).

For Chinese architecture development (ancient period), there are four main characteristics:
1) Chinese architecture is only system for basing on wooden structure in the world. Wooden structure is warm, light weight, and easy for horizontal expanding;
2) The mainstream is based on Chinese "Han" Architecture. Main achievements are exhibited on palaces and capital city design. Imperial Power and Political Ethics have critical influences on architecture;
3) Emphasis on connection between man and heaven by linking man's physical, as well as spiritual features with the creatures and regular phenomena in nature;
4) Emphasis on the ideal that form follows functionalism and group assemblies.
For West Country architecture development (ancient period), in the center of Conception of “Divinity”, it usually exhibits a very sharp contrast to the natural surroundings and separate man from the outside world, symbolizing the division of humanity and nature and has three main characteristics:

1) Basing on stone structure architecture system. These stone structural architectures are generally vertical development, so the “basic word” for West architecture is colonnade or pillar;

2) Most of Great Western architectures are eternal and are considered as monument, for example: Pyramid, Pantheon, Rome Saint Peter's Basilica, and Notre-Dame de Paris;

3) Having strong emotional colors. In Western Countries, architects usually extol some history period or satirize realistic society by using architecture exhibition.

What's happening now in Architectural Culture on China and Western Countries?

Modern Chinese architectural culture has chiefly three sources: The Chinese traditional architectural culture, foreign architectural culture, and the Chinese new architectural culture of the past hundred years. After analyzing the above three sources, we come to the conclusion that the characteristics of modern Chinese architecture are: 1) multi source and multi orientation; 2) comprehensive fashion; 3) surpassing tradition; 4) change with each passing day; 5) primary stage.

Since 1960s’, Western architecture presents the features of split pluralism, including different concepts, principles, and design methods. This is a peculiar cultural phenomenon and is lasting until now. Historical perspective for architectural field has a great transformation. The historical connection among architectural phenomenon has becoming more and more weak, showing the diversity trend. Many architects have attempts to express their own opinions and ideals for this world through architectural theory and architectural works. Moreover, users can also experience more sense beyond three factors – ‘Practical, Strong, and Beautiful’ from these works. The material, structure, form, space, dimension, and color for architecture have undertaken wider and more functions for expressing western cultural characteristics than previous periods.

Research Methodology: this paper is divided by three parts: ancient period, current period, and future development, but it focuses on current period analysis.
Ancient Period

a. On Humanity and Nature

The Chinese ask for a unity of humanity and nature, while the Western philosophy prefers a split between the two, which is the primary difference between the two cultures on the hypothesis of man-nature relation. The most conspicuous characteristic of traditional Chinese architecture is its strong emphasis on the continuity of man’s residence and natural environment. From the overhanging roof to the terrace-shaped structure, traditional Chinese architecture represents a strong tendency to melt into environment rather than stand out in opposition to it. On the contrary, whether it is a castle with stone walls and tiny windows in Middle Ages or a skyscraper prominently piercing into the sky in modern times, Western buildings usually exhibit a very sharp contrast to the natural surroundings and separate man from the outside world, symbolizing the division of humanity and nature.

b. Architectural material concepts

On the selection of architectural material, Chinese ancient architecture is belonging to Wood Structure System, called ‘Wood Epic’. In contrary, western country architecture is belonging to Masonry Structure System, called ‘Stone Epic’. Chinese people prefer wood as main architecture materials because a) There are abundant forests in the Middle Reaches of Yellow River (the ancient civilization cradle for China) and it is very convenient for people to use local wooden resources; b) Not only is it not easy to find appropriate stone material from local resources fitting local construction conditions, but also convey from outside is difficult; c) Under traditional cultural influences, Chinese people do not intently pursue eternal architecture except mausoleum. Chinese ancient architecture is based on wooden structure and weight-bearing depends on girder, while western country architecture is based on masonry structure and weight-bearing depends on wall and column. Natural environment for Ancient Greece and Ancient Rome takes Stone Hilly as main characteristics. Western ancient architecture exhibits a kind of stone-oriented ideology, mainly taking cold, tough, heavy, and huge stone to pursue a religious ‘outsociety’ spirit: having lofty, mystic, grand, and shocking effects.

Current Period

a. Urban Design and Transition

For China, there is a background for regional context in its urban system. This regional character is based on physical characteristics,
economic development, and cultural factors. Although now economic space for China has becoming more and more integrated due to new highways, rail lines, airports, and electronic communication systems, regionalism is still a critical factor for development politics. This is a major weakness and a distinct cultural phenomenon in China urban design and transition. Over the millennia of its history, China expanded territorially, incorporating many different peoples. There is thus, in addition to physiography and urban markets, a cultural overlay on its regional map, a quilt of regional identities that are distinguished from each other by language, religion, and tradition (Friedmann, 2005). Unfortunately, there are no the governance of city-building models directly applicable to China in the process of urban transition. Now, it is different from West Countries for Chinese cities to have no corporate entities with their own architectural culture and legislative bodies, even never become modern cradles of democracy for residential social life. I believe that this is the most fail for Chinese architectural culture in urban design and transition.

However, Western countries also experienced a fairly rapid transition from predominantly rural farmland to a residential urban community. From many diverse beginnings, cities have grown and spread urbanization is a major force in the modern world. For example, the pace and pattern of U.S. urban development are explained by changes in regional comparative advantage and in economies in transportation and local public goods, which in turn were determined by the changes in the economic structures of cities. These in turn were affected by changes in the economic structure of the American economy from agriculture to manufacturing and then to services.

In West Countries, urban design is essentially a three-dimensional process that focuses on shaping urban elements and their relationship within a coherent functional and visual structure. Moreover, urban development has been based on a definition of a city given by census and other government officials at any given point in time. In recent years, the most significant trend in economic geography has been the general dispersal of economic activities. From an urban standpoint, the trend toward population dispersion began much earlier. The introduction of more efficient intra-city transportation modes such as street railways allowed the population density to fall in the central cities as residences radiated outwards. This is distinct architectural cultural phenomenon for West Countries, not yet happening in China.
In Urban Design and Transition, there are four main trends on architectural culture:
1) Decentralization & Consolidation;
2) Crisis & Restructuring;
3) Urban Distress;
4) New Urban Geographies and De-urbanization

Today, the flow of immigrants to the United States and other western countries is increasingly from the developing countries (including China) with cultures different from traditional western culture. Therefore, impacts each other for architectural culture also has great influences on Urban Design and Transition of Western Countries.

b. Sustainable Development

Sustainable development is a development that meets the needs of present generations without compromising the ability of future generations to meet their own needs. Sustainable development explores the ways in which it is possible to maintain the current rate of development while protecting and sparing natural resources for later generations to achieve similar or even better development. However, there is a great distinction for understanding, influence factors, and development trends on architectural cultural and urban design in the two civilization zones.

For China, environment degradation now is severe and the Chinese landscape has been greatly transformed. Rapid increasing population and unprecedented economic development bring great challenges for sustainable development. Many Western Countries had the luxury of following a ‘pollute now, clean up later’ approach to development. For China in the twenty-first century, this is not a viable option (Day 212).

The vital problem focuses on Master Planning, including architecture and urban design, and the most weakness for China is Bureaucratic Fragmentation. Bureaucratic Fragmentation focuses on organizations within the state chiefly regional governments and functional ministries - as the actors with the most pull in the policymaking process. Current conditions in the PRC also are quite different from those that existed historically in the United States. Using law to manage social problems is a relatively new development in China. Generally, throughout Chinese history and culture, personal responsibility has been a proliferation of laws, including the legal framework under which an emissions trading program could operate. Many of the laws are written in broad terms and lack detailed guidance, and they are not been tested in practice (Day 173).

As China continues to grow, the juggernaut of economic development has been transformed to a more environmentally positive direction. There
are some encouraging indications on architectural culture and urban design, such as enforcing strict pollution standards, conservation of public green spaces, and stress on social and environment benefits, that sustainable development may be possible. Nevertheless, contemporary Chinese attitudes have been influenced primarily by economic or political factors rather than cultural considerations.

In West Countries, the dream of sustainable development is highly dependent on the acceptance of sustainable innovative technological practices due to facing a post-industrial world. It is also the exhibition of architectural culture on sustainable development. So the concept of ecological or “green” architecture has been proposed as the new means to solve the severe environment, social, economic, and health crises that confront society. However, on culture aspects, there are two main barriers. First is collaboration fragmentation similar to China: barriers range across professional and specialist territorialities that inhibit inter-sectoral collaboration among architects, industry designers, consultants, managers, owners, and contractors. The second is the urban design’s lack of understanding of the goal itself: the problem is not a one-dimensional, but includes poverty, population growth, and environmental degradation, each feeding the other in a continuous self-perpetuating downward spiral. For architectural culture on urban design for sustainable development, there are trends: Dematerialization, Mass customization, Intelligent operation, Soft transformation, and Emphasizing both artistic and sensitivity to nature (Malgrave and Contandriopoulos 421).

c. Special Architectural Technology Transformation and Development

Many scholars (Cohen, Khalil et al.) define technology for architecture as any knowledge, machine, tool, product, process, material, or method used to accomplish work. This is an extremely broad definition and, taken literally, can include everything from a pencil and a piece of paper to a nuclear submarine or a multi-million dollar computer network.

In China, since the Wenchuan earthquake in 2008, how to improve the earthquake behaviors of all structures on architectural technology development has been becoming a focus question in China once again. In architectural culture, people have started to refer earthquake resistance ideals in Chinese ancient architectures. These philosophical thoughts included using soft to overcome hard, achieving mild to instead of steep, preferring three-dimensional to plane, and transforming square to round on holistic structure. The ancient Chinese architects had built many excellent earthquake resistant structures with these philosophical thoughts,
but they are not attached importance to today’s people-nowadays architects are pondering this question in China. However, for Western Countries, in architectural culture, there have been numerous attempts to mass produce housing mainly in order to build faster, overcome skills shortages and cut costs since the end of the Second World War. People are eager to get large affordable new housing with high quality and low cost. So I can say modular housing is a typical production for new technology application under architectural culture development in recent years for Western Countries. In culture aspect, the modular housing from perception is usually installed on an individual plot and is in distinguishable from its traditionally constructed counterpart. Module is here defined as a factory-made, structural box with a part or fully finished interior that can be stacked and grouped with other modules to form permanent multi-storey buildings, which perform as well or better than their traditionally constructed timber, masonry, concrete or steel framed counterparts (Gianino 131). Now in most of Western Countries, most new hotels now incorporate pod bath rooms and large numbers of university students are being accommodated in new modular halls of residence. New material combinations and module production techniques have further increased the many advantages offered by modular construction, particularly in terms of higher acoustic performance and lower cost.

Future Development

a. Theory Development

Architects occasionally borrow, adopt, adapt, or improve other’s ideas - ideas that originally had nothing to do with building. Consequently, architectural historians often encounter, and have to make some sense of, theories or practices that in their original state were not architectural. An architectural theory that is systemic will elaborate the essential nature of this art, the purpose or ends for which it is made, and the means that it ought to use in order to fulfill its nature and attain its purpose.

For China, architectural theory development on culture has not only showed ‘Exclusive Characteristics’, but also ‘Compatibility’. It is a mixed entity, having five trends: De-sinicization, De-architecturization, De-Politicalization, and De-Socialization. In China, starting and end of architectural theory are both belonging to studies in Science of Science: philosophy problems. So, for the field of architectural science, architectural philosophy is the starting and end of architectural theory (Gu 14).

In West Countries, Architectural theory emerges from within a historical context, but it also transcends this context, acquiring validity and
applicability in cross-temporal and cross-cultural way. Modern Western Countries have entered into ‘Post-industrial’ society and pure natural environment has disappeared. The whole society has been experiencing great change and has become a ‘Humanization’ world. ‘Culture’ has becoming the second nature. For architectural theory development, they focus on 1) Form does not always follow functionality; and 2) Deconstruction and Post-structuralism.

b. Urban Development Trends

Transformation of the urban landscape China’s cities in the reform era will have a major revision of spatial practices. On architectural culture, new urbanism represents a growing awareness that architects and planners have a responsibility to society. In China, it is an urban design movement that incorporates traditional town and city design with the principle of smart growth and smart transportation to create liveable sustainable communities. In addition, facing changes in urban development and problems of urban sprawl, urban design has not been a simple job suited for one profession, one department, or one group and the cooperation of a number of government departments, social organizations, professional practitioners, and local citizens is needed. There are four trends for China future urban development: 1) Continuing Urban Sprawl; 2) Natural Resources Depletion; 3) Industrialization and Urban Pollution; and 4) Floating Population in the Cities; Rural-Urban Labor Migration.

In West Countries, although there is a broad consensus that urban development strategies must attribute considerable attention to sustainability issues, it continues to be debated what the specific dimensions that such a strategy implies. On architectural culture development, due to Highway Building, House Policies, Lifestyle Choices, and Competition for Tax Revenue, seven major trends for urban development are: 1) Low-density development; 2) Strip commercial development; 3) Scattered development; 4) Leapfrog development; 5) Unlimited outward expansion; 6) Fragmentation of power over land use among many small localities; and 7) No centralized planning or control of land use.

CONCLUSION

Architecture has relatively perpetual characteristics, expressing forced ideals and aesthetic concept, so in specific period and places, people will build grandiose architecture to exhibit their culture. Both Chinese and Western Country architectural culture are the common wealth of the
development of the human society. This study will focus on a strong contrast between the two civilization zones in different cultural connotation development between their architecture, based on longitudinal and latitudinous comparison, positive and negative poles, subjective and objective comparison, and factor and evidence analysis, and finally endeavors to point out development law and their own future development tracks.

Architecture is a part of culture and its shape is decided by cultural connotation. The different culture between them dominates the architecture criterion. Conventional architecture in China focusing on man has been embodies logos spirit and romantic sensation about enjoyable and recognition living of life time, no matter on space layout, structural sculpt or ornamental design. While the conventional western architecture focuses on divinity and represents religious yearning for God and eternity, even religious fanaticism. The extension of the cultural study to urbanism can also be linked to religions, beliefs, and folklore (Pollawat 62). This paper makes an architectural analysis comparison that embodies culture connotation, period development, and an innovative study method. Through comparison analysis and studies, we have a comprehensive cognition on different cultural backgrounds and unique exhibition forms for different architectural styles on China and Western Countries; have a deeper understanding on architectural culture communion between China and West Countries; make a appropriate direction for realizing urban transition in two different civilization zones; find a future developing way with ethical features and spirit for Chinese and Western architecture; and present a model of study process for the similar comparative studies.

Literature Review

This book presents a succinct, readable account and interpretation of how this transition - one of the most momentous phenomena in contemporary history - has occurred. In this book, detailed analysis suggests that the nation's economic development has been driven more by social forces from within than by global capital. Finally the author raises the question of a "sustainable" urban development and its relation with China's own past, values, and institutions and predicts that within ten years China - already the most powerful country in East Asia - will have become a major power
in the world. With historical depth, interpretive insight, and interdisciplinary breadth, this book offers an unparalleled introduction to China's transformation. This book is very useful for my research because my paper is based on Architecture and Urban Design as the center for having research. And in the part of current period, Urban Design and Transition is a very important subject. I can get many materials and data of Chinese urban transition from it.

Day, Kristen A. *China's Environment and The Challenge Of Sustainable Development*. Armonk: M.E. Sharpe, 2005. Print. This book covers a broad range of topics, from specific environmental assessments in key sectors (i.e. desertification) to the policy implications of China's entry into the WTO. The contributors include scholars, government officials, business consultants, environmental science and technology experts, and others based in China and the United States. Through this book, I can get reference materials for Chinese sustainable development, which is one of subjects (Sustainable Development) in the current period part which I plan to have comparison analysis in my research.

Liu, Yue. *Comparison Analysis on architectural Aesthetics in China and Western Countries*. Shanghai: FUDAN University, 2004. Print. On the theoretical basis of Chinese and western culture, with the comparative objects of their architecture, in a view of problematic consciousness, this dissertation manages to show different cultural connotation and aesthetic character between their architecture, endeavors to point out its developmental track the moment. As this dissertation states, architecture is a part of culture, and also a product physically or mentally. The architecture shape is decided by cultural connotation. The different connotation between them dominates the aesthetic criterion. Conventional architecture in China is focusing on men, embodying logos spirit and romantic sensation about enjoyable and recognition living of life time, no matter on space layout, structural sculpt, or ornamental design. While the western focus on divinity, and represents religious yeaming for God and eternity, even religious fanaticism. This study is belonging to one of subjects in the ancient part which I plan to have comparison analysis in my research.
This dissertation has a comprehensive comparison on Western and Eastern cultures in the case study of The Mississippi River at New Orleans and the Chao Phya River at Bangkok. It focuses on the cultural, historical and geographical aspects from architecture and city planning and includes interviews of residents and physical observation of each city. Moreover, this paper presents theoretical design guidelines and conceptual models and processes applied to both studied sites for the improvement of each city’s memory of its river (Pollawat, 2002).
My research is similar to this article in some degree, while in my research the focus is architectural culture: architecture is the vehicle and culture is surrounding around and has an exhibition on it. I can have some references on comparison models based on contrast between Western and Eastern cultures from this paper, but I use wider analysis subjects and expand research field comparative to my study, not only locating on limited backgrounds for rivers and cities.

The underlying structure of this comparative study of Western European and Japanese architecture exists in the basic similarities between the geographical conditions and historical development of the two civilizations. Between two sides, one essential difference lies in the presence or absence of walls, which have been essential to Western architecture in creating aesthetic values. The architectures compared in this study are the concrete images of the people’s minds that created them. In this study, traditions of food preparation, clothing design, and stage performances, in Western Europe and Japan, were shown to reflect the same patterns of conceptual and non-conceptual thought revealed in the architecture of the two cultures.
Japan is a very specific country. In geographic location, Japan is neighboring with China and is belonging to Asian Countries; in ancient cultural background, Japan and China are both based on Confucian civilization zoning; and in economic level, Japan is considered as Western Countries. So I can have a reference on subjects in ancient period part for comparison analysis in this paper: cultural structures, material concepts, and case study.
References


