Hongxun Yang

The Archaeological Studies of Chinese Palaces

Translated by Huizhong Bin
Jiajun Chu

上海交通大學出版社
Shanghai Jiao Tong University Press

Springer

The Archaeological Studies of Chinese Palaces

Hongxun Yang

The Archaeological Studies of Chinese Palaces

上海交通大學出版社
SHANGHAI JIAO TONG UNIVERSITY PRESS

Springer

Hongxun Yang
Chinese Academy of Social Sciences
Institute of Archaeology
Beijing, China

Translated by
Huizhong Bin
Department of Architecture
Shanghai Academy of Fine Arts
Shanghai University
Shanghai, China

Jiajun Chu
Beijing Chinese-Foreign Translation &
Information Service Co., Ltd.
Beijing, China

ISBN 978-981-96-6173-2 ISBN 978-981-96-6174-9 (eBook)
https://doi.org/10.1007/978-981-96-6174-9

Jointly published with Shanghai Jiao Tong University Press
The print edition is not for sale in China (Mainland). Customers from China (Mainland) please order the print book from: Shanghai Jiao Tong University Press.

This book is funded by Chinese Fund for the Humanities and Social Sciences.

Translation from the Chinese Simplified language edition: "《宫殿考古通论》" by Hongxun Yang, © Shanghai Jiao Tong University Press 2009. Published by The Forbidden City Publishing House. All Rights Reserved.

Previously published by Shanghai Jiao Tong University Press

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Preface

As the author of the book, I received a regular professional education at the department of architecture of a school of engineering. However, my career journey to architectural archaeology can be described as serendipitous. In the 1950s when a wave of "Marching towards Science" swept China, I was assigned to work as an assistant to academician Mr. Liang Sicheng (1901−1972) at Chinese Academy of Sciences (CAS), focusing the research on architectural history and theory, where I was honored to get acquainted with Chinese pioneer archeologist Mr. Xia Nai (1910−1985). Strictly speaking, it was in 1956 when I first visited and worked as an intern on the Neolithic, Han and Tang archaeological excavation sites of the Institute of Archaeology of CAS, that I became attached to the discipline of archaeology. To date, I have immersed myself in this field for 45 years. Not until the 1970s did I officially step into the archaeological community. In the early 1970s, Mr. Xia was appointed as the leader of the leading group within the Institute of Archaeology, CAS. In 1973, with his official authority as the group leader, Mr. Xia timely transferred me to his institute. However, shortly after I joined, he was dismissed from his post.

Mr. Xia enjoyed a worldwide academic reputation for his scrupulous spirit in scholarly research. Acutely noticing the limitations of nonprofessionals engaging in highly specialized archaeological work, he was always concerned about the continuous development of the discipline of architectural archaeology. In 1965, the year before the "cultural revolution," when learning that the Department of Architectural History and Theory chaired by Mr. Liang was dissolved, Mr. Xia proposed to transfer one staff member at Mr. Liang's department to his institute. He told me that, since I was in no way to be transferred, he had to select one from the other four staff members. He had twice turned to Mr. Liang for recommendation, who, however, merely briefed Mr. Xia about their profiles to let him decide. A year later, this personnel-transfer matter had to be put off due to domestic political dynamic. The next year following Mr. Liang's death in 1971, Mr. Xia Nai gathered that the dissolved architectural theory and history research institute would not be restored, and I would probably become transferrable, so he started to inquire about my whereabouts. Finally, in 1973, I was officially transferred to the Institute of Archaeology

led by Mr. Xia, embarking on my academic pursuit of ancient architectural sites, and working on establishing the branch of "Architectural Archaeology." On my first working day at the institute, Mr. Xia outlined the plan of first setting up a research group on architectural archaeology, and then extending it into a research office. This ambition apparently showed his great attention to the field. With Mr. Xia's arrangement, I had the chance to be bound with architectural history and archaeology, thus wholeheartedly taking on the mission of developing this discipline.

Presently, I am, at the invitation of Mr. Sun Guangen, chief editor of the Forbidden City Press, writing *The Archaeological Studies of Chinese Palaces*, as a key component of my ongoing work on the evolution of ancient Chinese architecture. To this end, I have been prompted to conduct a thorough examination and verification of the historical records of palaces. My work on this front will also lay a foundation for the analysis of physical materials afterward. In many cases, the verification process has proven to be more challenging than the subjects involved in *A Collection of Essays on Architectural Archaeology*. The book can be regarded as an academic synthesis of my 30-year-long discoveries in the field of architectural archaeology, which is expected to be conducive to research in archaeology and architectural history. Criticism and correction are cordially welcome from readers for future improvement.

Changyungong, Beijing Hongxun Yang
In the early spring of 2001

Introduction: An Overview of Palace Archaeology

Palace Archaeology Is Requisite for Developing Chinese Architectural Historiography

The architectural environment provides stages for human social activities. In other words, architecture is a carrier of history, and therefore, a thorough study of architectural history helps achieve a more graphic and concrete understanding of human social history.

The study of Chinese architectural history, a discipline established over half a century ago, experienced several stages as follows: initially, we completed the collection of historical materials and the examination, correction, and research of ancient architectural terminology by centering on surveying and mapping the remaining ancient buildings; in the late 1950s and early 1960s, we published *A Brief History of Ancient Chinese Architecture*, an outcome of the entire community of architectural history who were motivated to complete the compilation and preliminary analysis of partial historical materials of dynastic historiography; then in 1980, we published *History of Ancient Chinese Architecture* (revised version), laying solid foundations for further studies of Chinese architectural history.

In studying architectural history, two conditions—historical materials and logical reasoning are believed to be essential and indispensable, to put it another way, "Tenable opinions (theories) are built upon solid materials (facts)." Hence, architectural historical materials, particularly physical ones, are the most fundamental elements. It's nearly impossible to keep ancient physical buildings intact for a long duration, much less the civil structure constructions in ancient China. The complete extant wooden construction today should be the over-a-millennium-year-old main palatial hall of Foguang Temple in Wutai Mountain, Shanxi Province, which can be traced back to as early as the late Tang Dynasty (618–907). Yet, great leaps forward in ancient Chinese architecture occurred before the Sui (581–618) and Tang dynasties. Not until the Eastern Han Dynasty (25–220) had Chinese classical architectures dominated by civil structure construction taken shape. In this sense, the past archaeological work we have done contributed only a small portion to historical studies.

If we want to delve into this historical discipline—architectural history—from a more holistic view, our research should extend to the periods prior to Sui and Tang. Admittedly, the historical data and discussion on architectural development after Sui and Tang are far from comprehensive, and scholars in the field will continue their research work. Meanwhile, Pre-Sui studies, a weaker link in Chinese architectural historiography, are the very essence of our central task. And we ardently welcome more architectural historians' participation.

Throughout the long ancient history, royal palaces—exclusive buildings for rulers of empires, represent the superb achievements in architecture of the period. Unfortunately, the only remaining palaces preserved up to now were the Forbidden City of the Ming (1368–1644) and Qing (1636–1912) dynasties in Beijing and the Palace of the Qing Dynasty in Shenyang. Palaces of the early Ming and Yuan (1271–1368) dynasties had vanished, let alone those of earlier periods. The remaining palace buildings hitherto are merely enough to write a compilation of their historical materials, but inadequate to write a comprehensive historical book covering the emergence and evolution of ancient architecture. To know about the evolution of architectural history running through over 10,000 years, we have to dig out the burial relics and ruins underground, which, not as easy as acquiring the surveying maps and pictures of existing ancient buildings, needs the assistance of archaeology, so was born the discipline of architectural archaeology.

Archaeology has been of great significance to architectural history. "Just as the remains of extinct animals are fundamental to resurrect their structure, the remains of production implements are fundamental to infer what the already gone social-economic formation was like."[1] Analogously, relics and ruins of historical buildings are of great value to restore their original states and learn about their evolution. Therefore, architectural archaeology, with relics and ruins of historical sites being the study objects, becomes a discipline adjacent to architectural history, and it is fair to say that the two disciplines overlap to some extent. From the archaeological perspective, ancient settlements, ancient cities, historical sites, and ancient tombs are equally important objects of study. In terms of architectural history, due to the lack of physical relics left from the earliest times, archaeology becomes the only approach to acquiring the physical materials that literature is unable to provide. With the constant technological advancement, general archaeology has spawned a branch—architectural archaeology, with the support of which, research on architectural history entered into a substantial stage.

Royal palaces have been a key component of Chinese architectural history research. In the Western world, church buildings usually represent the highest architectural achievements. While in ancient China, where ethics were more valued than religion, with Confucianism being the guiding thought of state governance, palaces represent the supreme architectural accomplishments, which can be viewed as a tangible embodiment of Chinese culture with Confucianism at its core. An imposing, stately ancient Chinese palace was like a textbook of ethics, which, as "the end of all

[1] Karl Marx, "Capital," in *Marx/Engels Complete Works Vol.23*, 204.

sides" described by the Chinese philosopher and politician Guan Zhong (c. 720–645 BC), was seated in the center of the capital city, acting as the heart of the country.

With the birth of countries came sovereign rulers. In the earliest slave kingdoms, it was called King, and well into the feudal empires, renamed to Emperor. At that time, the sovereign ruler, holding the supreme power, owned everything: the land, the wealth, and all the subjects. Living in the dark times of science, the benighted people then, facing the mysterious and powerful natural world, had nothing to do but yield. The capricious natural world sometimes shows its tenderness, smilingly spreading sunshine, rain, and dew; sometimes bursts into fury, sending downward thunder, lightning, and wild fire to crack mountains and land, with disasters befalling creatures of the earth. The people in awe were convinced that there must be a predestined, formidable, unseen Celestial Ruler reigning the whole world. The King or the Emperor—the so-called Son of Heaven (*tianzi*), was the earthly ruler on behalf of the Celestial Ruler. Ancient Chinese philosophers, based on the notion of respecting and complying with nature, upheld that, with social progress, it was the will of Heaven, or the law of nature, to have one single Son of Heaven lead the state governance. To rationalize this logic, they formulated related laws and rites to maintain this system, and explained the way to uphold the dignity of rulers by saying, "The Heaven is the Prime Leader, so is the Emperor." Then, demonstrating the supremacy of the "Emperor" became an urgent task. Though distinctive suit clothing, chariots and honor guards could express stateliness, no form can bespeak the emperor's paramount position more uniquely than his place of residence—the grand royal palace, where he could live and work. As to the palace's functions, Xiao He (257–193 BC), a founding minister of the Western Han Dynasty (206 BC–9 AD) founded by Emperor Gaozu of Han (c. 256–195 BC, Liu Bang), profoundly stated, "The Son of Heaven, with the whole world in sight, must have the palace bespeak his high and might." So the palace for the Son of Heaven must be incomparably resplendent, magnificent, emitting so imposing a deterrent force that the shocked subjects felt dwarfed, and had no other choice but to be submissive.

Dwelling houses, as basic needs of livelihood, are viewed as a phenomenon with great social and historical value. This creation is, as German philosopher Friedrich Engels (1820–1895) said, "the production of the immediate essentials of life," and "the determinant of history." The architecture, the artfully extended "houses," i.e. the people's living environment, was paid much attention to. Particularly, the first-level royal palaces, as the crystallization of the uttermost social wealth and wisdom, intensively reflected the level of ideology, culture, arts, engineering technology, and social productivity of the period. In slave kingdoms and feudal empires, the majesty of the Son of Heaven—the supreme ruler, was first and foremost unfolded by his palace. According to *The Book of Rites*, "In the application of rites, loftiness is reflected in vast quantity, large scale, high ceiling, and intricate décor," which were fully manifested in royal palaces—characteristic of a large-scale building complex consisting of many single architectural units with high city walls, multi-layered courtyards, heavily-fortified gates, and massive, magnificent halls with fine and intricate decorations. For the supremely majestic king or emperor, the resplendent, towering palace,

apart from greatly gratifying their material and possession enjoyment, also manifested the material abundance, spiritual civilization, and social hierarchies of the period. Imperial architectures were regarded as the highest art-crafted architectural achievements of the times, indicating that, in the long history, from slave to feudal society, the royal palaces were, undoubtedly, the most representative buildings.

Palace architectures best symbolize the power of the King or the Emperor, which is, for every country the world over, special and characteristic, well incorporating the folk architectural experience and the official rigorous rules. In China, palace architecture can be said a comprehensive expression of ancient patriarchal notions, ritual etiquette, and cultural tradition. Nothing other than palaces could unfold the mainstream thoughts, history, and traditions of the period. As a well-known saying reads, "Architecture is a historical book written by stones." So, when a society perished, the remaining buildings continued to tell the history. Through palace architecture, the after generations have the chance to interpret the then social form. By reviewing the history of palace architecture, we can graphically master the dominant ideological forms and trends of ancient times.

Through archaeological methods, plus a literature review, the book restores and verifies many materials of palace relics, in an attempt to recover as much as possible the authentic history of Chinese palaces. The narration in the book, subject to limited archaeological materials available now, is far from complete and thorough, surely resulting in some omissions of laws of development in architectural history. So, we look forward to more research achievements added in future republications with more new archaeological discoveries.

The Discipline Ascription of Palace Archaeology

Palace archaeology is an important component of architectural archaeology, which, as a newly rising branch of archaeology, has only 30 years of history.

The proceeding path of modern Chinese archaeology in the 20th century is encouraging. Since archaeology, based on field survey and excavation, was originally introduced to China in the 1920s, it has burgeoningly developed upon traditional Chinese epigraphy and textology to a level on par with advanced countries. Up to today, China has been in the front rank in archaeological achievements and development.

Next, we will first learn the basic facts of archaeology.

Until the 19th century, archaeology (*kaoguxue*) has grown to maturity, whose mission is, actually, identical with the history discipline—relating authentic history to the uttermost. Their only difference is that, history mainly relies on literal documents while archaeology on physical objects. So far, archaeology is usually divided into two branches: general archaeology and special archaeology. The former, still at its early stage, divides research areas according to age, including "prehistorical archaeology" (*shiqian kaoguxue*) and "historical archaeology" (*lishi kaoguxue*). In the Chinese context, *Shiqian* and *lishi* may be mistranslated to some extent; their original meanings in the source language are "pre-literary history" and "literary

history," divided by the birthday of the writing system. "Prehistorical archaeology" covers the Paleolithic Age and the Neolithic Age (we may add "Mesolithic Age"), while "historical archaeology" covers the "Bronze Age" and the "Iron Age," all of which are built on field archeology.

The core of archaeological work lies in field technology, as well as laboratory instruments and chemical identification, which are categorized into methods of natural science. But fundamentally speaking, archaeology, the same as history, falls within the realm of human science, and is a discipline incorporated into colleges of liberal arts. Regrettably, facing numerous ancient relics and ruins involving wide knowledge of natural and engineering sciences, the reserves of colleges of liberal arts are far from adequate. Besides, the research of ancient porcelains, bronzes, ships, and architectures, whether through on-site field relic identification or laboratory research, demands not only methods of human science but also engineering expertise.

From the 1970s onward, archaeology, thanks to modern sci-technological advancements, has made more accomplishments, not only in survey and excavation technology but, more importantly, in its combination with natural science and engineering science for the study of complicated ancient relics and ruins, which breaks the initial age-division limitations of archaeology introduced by Europe. Instead, sub-disciplines divided by research fields emerged, such as ceramic, bronze, architectural, agricultural, and environmental archaeology, which, compared with general archaeology, can be called "special archaeology," or "specialty archaeology."

Before the emergence of "special archaeology," the archaeological study of cultural relics and historic sites had already met many specialized issues, not yet condensed into professional knowledge. Take porcelain archaeology for example. Presently, we could only give porcelains perceptual and intuitive descriptions, like "flimsy as paper or glossy as fine jade"; and divide historical periods based on already-known porcelain chips or their samples. Only when porcelain archaeology is integrated with specialized knowledge based on silicate and porcelain technology, can it break away from traditional archaeological methods relying on the appreciation and teaching of antique dealers and collectors, and ultimately establish the sub-discipline—porcelain archaeology. This holds true for bronze archaeology, whose research, before being combined with metallurgy, casting and welding, focused on bronzes' appearances, like shapes, patterns, and inscriptions. Until smelting and casting based on metallurgy are involved, bronze archaeology can delve into the bronze's invisible essence, so the sub-discipline—bronze archaeology—came to formation finally.

Likewise, archaeological studies of ancient architecture, ancient settlements, and ancient cities have progressed from perceptual to professional knowledge. More regrettably, architectural heritage remains rarely unearth accompanying objects, and are also barely transferable to museums, so losing their appeal to people at a time when "excavating burial sites for treasure" prevailed in China, and causing irretrievable damages. Moreover, the study of heritage sites, whether ancient architecture, settlements, or cities, requires multi-disciplinary expertise beyond archaeology. Consequently, few people have shown interest in heritage sites in field excavation in general archaeology. Even if heritage sites are excavated, related descriptions tend

to be lacking in concreteness and accuracy, and sometimes have omissions and jump to rash conclusions; the attached pictures are often sketches, so difficult to build a basis for further research.

From the 1920s and 1930s onward, field archaeologists have studied and excavated several architectural sites, including residential cave relics of the Neolithic Age, and architectural remains during literary history. The most well-known of these is the Ruins of Yin (*Yinxu*) in Anyang, Henan province. It is a massive palace complex dating back to the Shang Dynasty (1766 to 1122 BC), from the Bronze Age. Since the branch of architectural archaeology had not been established, the approach to handling architectural heritage sites followed that to burial sites adopted in general archaeology—abiding by the principle of "digging till immature soil is exposed," which usually razed the rammed earth foundation together with its base, until the immature loess underground was exposed. As a result, when the excavation work of a palace site was finished, some treasured objects were thrown away along with the waste dump. Similar mistakes were repeatedly made during the excavation of the Ruins of Yin in Xiaotun Village. So, we can conclude that the excavation of heritage sites is definitely unequal to architectural archaeology.

The aforesaid non-professional problems in archaeological work still existed after the founding of new China. Though the rammed earth had been consciously kept, omissions and misjudgments in the professional analysis of architectural heritage sites occurred frequently. For instance, in the archaeological work of Neolithic sites, the ruins of collapsed architectures have been kept intact, with the roof remnants suggesting that it was a mud-proofed covering, but the "recovered sketch," perhaps only out of the drawer's common sense, rendered it to a thatched roof. When treating the water-proofing mud edge in the collapsed chimney on the roof, including straight edge, short-radius, arc-curved mud ridge, and mud ridge end, the working staff still followed the conventional approach to pottery-edge restoration, restoring it to a bowl-like, long-radius "circular roof." In some Neolithic heritage sites appeared "earth-pillars," namely, the early pillar holes stuffed with rammed earth were once more padded with more earth to create a new residential surface. However, when excavated, the surface was removed, only retaining the harder rammed earth in the pillar holes. The wooden log construction architecture dug out from the bottom of a Neolithic pond was wrongly labeled as remains of "primitive buildings for worship." The remains of the "earth stairs" of the Shang Dynasty palace were mistakenly taken as a complete "altar." As a matter of fact, the remains of the four steps and the plain soil pedestal at the base of the pillar show that, it was a residual height, which provided evidence for deducing the original height of the palatial hall groundwork and the positions of some palace pillars.

Since the rammed earth-mounded platforms in the raised-up palatial ruins from the pre-Qin Period (before 221 BC) through the Western Han Dynasty had been lost when excavated, it was, misidentified as low stylobate based on general knowledge of after-period ancient architectures. In another case, the inner courtyard of a raised-up building had piled debris, while the residual surface of the raised platform parallel to the horizon was rather clean, and consequently, the former was mistaken as a "palatial hall" and the latter as an "inner courtyard." When excavating the palace

sites of the Tang Dynasty, not until the edge of the stone groundwork was exposed had the excavation work been put to a premature end, and misjudged the square brass pillar as the first found "prop-up eave pillar." The groundwork and gentle slope in the Sui-Tang palace against the mountain, being cut into shape through the subtraction method, were, even evidenced by lime plaster, not considered as architectural ruins; instead, the confused people wondered "how immature soil could be a building." In treating building elements and building material samples, they were all cleaned up through general archaeology's approach to other common ancient objects. For instance, the bronze elements were first soaked in weak acid; then with a wire brush, the attached colored paint and the cushion silk were scrubbed. And the clay adherent to the unearthed ceramic roof tiles and the paint marks on the eave edging were cleansed. These cleaned elements, however, are important relics that should have been preserved. In a word, these mistakes should be attributed to the want of professional knowledge of architecture, civil engineering and architectural theory and history, which are indispensable to the archaeological work of architectural sites.

Since 1973, the Institute of Archaeology, the Chinese Academy of Social Sciences (CASS) has been dedicating, single-handedly, to specialized architectural archaeology, contributing to developing the archaeological research on ancient buildings, ancient settlements, and ancient city sites into a systemic sub-discipline—Architectural Archaeology. In 1987, A *Collection of Essays on Architectural Archaeology* published by Cultural Relics Publishing House discusses for the first time the necessity and meaning of establishing Architectural Archaeology as a discipline. The book has received recognition from Xia Nai and Su Bingqi (1909–1997), both leading authorities in archaeology and successive director-general of Archaeological Society of China, and also caught the great attention of academic circles at home and abroad.

Epistemology and Methodology of Palace Archaeology

Palace archaeology falls within the realm of architectural archaeology. The creation of architecture is driven by people's shelter needs. The excavation and research of residential ruins in the Stone Age plays a vital role in helping know the whole picture of history. American anthropologist Lewis H. Morgan (1811–1881) in his book *Ancient Society* (1877) writes, "House architecture, which connects itself with the form of the family and the plan of domestic life, affords a tolerably complete illustration of progress from savagery to civilization." As the saying goes, food, clothing, and shelter are the three basic needs in daily life, regarded as "the production of the immediate essentials of life," the determinant of history." In ancient tomb archaeology, the unearthed skeletons are of great value to the study of physical anthropology, since they are invaluable data for the research into "production and reproduction of human self." The accompanying burial objects like clothing and food are also important materials for historical research. The extended houses, namely the architecture and even the whole manmade-environment, provided stages for carrying out social and historical activities, so the archaeological excavation and research of

architectural sites can offer important materials for studying social and life forms of the period, filling the gap of tomb archaeology.

In China, the remains of two roundhouses discovered in Yanjiagang, Harbin in the late Paleolithic period or Mesolithic period can be dated back to 22,000 years ago. From the perspective of the whole Chinese nation, it was around 10,000 years ago that our primitive ancestors started a sedentary life, boosting the house's production and reproduction, which became the then top priority of social construction, with civil engineering and architecture first emerging as the oldest engineering discipline. Historically, the earlier the period was, the more important architectures were. In the prehistorical period, the building of houses covered nearly all categories of social production, thereby all-roundly reflecting the then situation of social productivity, and to some extent, of the relations of production and social ideology.

In the archaeological study of the Neolithic Age, the Yangshao Culture period was inferred as a matriarchal-clan society, which was evidenced by tombs, and more graphically and specifically, the relics of settlements and houses. The Yangshao settlements in Banpo, Jiangzhai, and Beishouling sites were divided into sections of residence, pottery making, and tombs. In the residential section surrounded by trenches, houses were built all around a central square, whose layout reflected a clan-commune order, and the communal principles of equality, solidarity, and unification among members, demonstrating the maturity and prosperity of the matriarchal clan society. But into the Longshan Culture period, this layout was disrupted, with houses or even tombs being built on the central square, and pottery kilns built in the residential areas, reflecting that the clan-commune order was undermined. The appearance of house complex and the public cellaring shifted indoors, suggested the budding of privatization, wealth inequality, and robbery phenomena, and also revealed the transitional trend to the patriarchal society featuring house-hold and family, with clan society left in an empty shell. The heritage sites have unearthed rich and varied residual materials, providing abundant proof for sharp and smart archaeologists.

The purpose of research on the history of human society, whether through historical records, or physical relics and ruins, is to unfold various aspects of ancient societies with maximum accuracy. In other words, history, archaeology, and all historical research, including sci-technology history, are designed to feel out the continuation of ancient times with the incomplete residuals as clues, or put briefly, a scientific restoration work. Architectural history is required to accurately describe the development process of architecture, the first step of which is to acquire knowledge of the architecture's original states of all historical periods. As to the architecture of the prehistorical period, a scientific survey of heritage sites, ruins, and relics will play an essential role, also a major task in architectural archaeology. We can conclude that the core of architectural archaeology lies in restoration research, just as the archaeological work on ancient potteries, the first step of which is to restore the broken pottery as a whole. For further study of, whether pottery-craft or social aspects it mirrored, it's still a cognitive restoration process. In this regard, we disagree with the censure of scientific restoration.

Restoration of ancient relics and ruins and research on architectural development are tangible, knowable, and systematic, which breaches the ignorant conclusion that "architectures multi-millennia years old are incognizable to modern people." Even worse, someone took advantage of this unknowability, doing "restoration" work based on subjective conclusions rather than objective surveys. To address this problem, two points are worth putting forward: first, the golden rule in restoration work is to enable the credibility of ancient ruins; second, the restoration of ancient settlements, ancient cities, and ancient architectures must resort to well-founded, evidence-based scientific demonstration. As for the first point, the restoration work must focus on ancient objects themselves, and it's not allowed to fiddle with the relics' forms or data to "rationalize" the replica. The exploration of ancient ruins, which are usually beyond our cognitive boundary, requires to be grounded in facts and data available. If existing materials are insufficient for us to have new discoveries, knowledge, or imagination, it's allowed to leave the matter as it is, be it the ruins' functions, space, shape, or structure and materials, for future consideration, and forbidden to destroy the original design only for self-justification or superficial beauty.

In view of the second point, related research should be raised to a higher theoretical level, which, in other words, means that we should broaden our historical vision beyond physical materials. Archaeology, unlike historical research based on literature, puts more effort on tangible objects, whose essential research methods fall under the category of "natural science."[2] Friedrich Engels once said, "The form of development of natural science, in so far as it thinks, is the hypothesis." Considering all scientific research is theoretical, scientific hypothesis is essential for seeing the whole from the fragments and summing up the dynamic, evolving law of history from isolated and static cases.

There's a famous saying, "An ounce of materials, an ounce of conclusions," to highlight the seriousness of scientific research, but in some cases, with high-quality materials, "An ounce of materials is worth a pound of conclusions." Take an ancient pottery basin as an example. When a bit of its mouth edge, abdomen, and bottom parts can be pieced together, however narrow and tiny they are, it can be wholly restored with the discovered rotating trajectory, through which, the restored pottery basin is believed to be genuinely reliable, even if 80 percent of it is supplemented with new plaster, well demonstrating that "less can speak more." The key to the restoration of pottery basin is to master its making process, which holds true for the restoration of architecture, except the latter is more complicated. When we apply the knowledge of architecture, civil engineering, materials and mechanics, as well as follow integrative thinking with craft logic and historical logic, we may recover the relics' outlook as it was. With sufficient direct evidence, correct identification is possible even to laymen's eyes, but in most cases, the number of relics is limited, a fact that requires reasonable, logical thinking, and professional research based on all-rounded expertise knowledge and circumstantial evidence, which are mostly helpful to have a basic understanding.

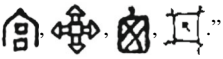
[2] Frederick Engels, *Dialectics of Nature* (Beijing: People's Publishing House, 1984), 117.

In studying the evolution of ancient architecture, only relying on historical documents or literature will get us nowhere. To make the discipline of architectural history reliable, archaeology has been proven to be indispensable. In this sense, architectural archaeology is the basic subject of architectural history, which is conducive to laying a solid foundation for and boosting the latter's development. As a sub-discipline diverged from archaeology in the late 20th century, the subject has contributed greatly to both the extension of special archaeology and the development of its adjacent discipline. All in all, acquiring historical materials of the earliest architectural relics and ruins mainly depends on field surveys, but knowledge of architectural history is also essential. So the unison between archaeology and architectural history gives birth to architectural archaeology, an important sub-discipline of special archaeology. Sadly enough, setting up a research group or office of architectural archaeology research as Mr. Xia Nai wished has not been realized. The author's ongoing work, *An Introduction to Architectural Archaeology*, can be said to be a preliminary attempt to establish Architectural Archaeology as a regular discipline. The book aims to build a framework of discipline involving basic theory, methodology, field survey and excavation, and the particularity of indoor research, to meet the demands for scientific research, teaching, and development of the discipline. We will attempt to enable this book to lay a solid foundation for the continuous development of architectural archaeology in the 21st century.

Contents

About the Author

Mr. Hongxun Yang (1931–2016) born in Lixian County, Hebei Province, was a distinguished figure in the realms of architectural history, archaeology, and landscape architecture in China. Throughout his illustrious career, he held several esteemed positions including research fellow at the Institute of Archaeology of the Chinese Academy of Social Sciences (CASS), chairman of the Architectural History Society of China (AHSC) within the Architectural Society of China (ASC), academician of the Russian Academy of Architectural Heritage, and consultant to UNESCO. Mr. Yang completed his education at Tsinghua University's Department of Architecture in 1955 before embarking on his professional journey as an assistant to academician Liang Sicheng at the Chinese Academy of Sciences (CAS), the precursor to CASS. In 1973, at the invitation of the archaeologist Xia Nai, he transferred to the Institute of Archaeology of CAS to engage in architectural archaeological research. Afterward, Mr. Yang served as a visiting professor at prestigious institutions including Kyoto University in Japan and National Taiwan University in China's Taiwan. His scholarly works, such as *Essay Collection on Architectural Archaeology*, *A Treatise on the Garden of Jiangnan: A Study into the Classical Art of Landscape Design of China*, *The Daming Palace*, and *The Archaeological Studies of Chinese Palaces*, have earned widespread acclaim both domestically and internationally. Owing to his groundbreaking contributions and enduring legacy in advancing the discipline, Mr. Yang is celebrated as the founder of Chinese architectural archaeology.

92. Wu Fengyun. “The Western Xia Mausoleums and Their Architectural Features.” *Ningxia Cultural Relics*, no. 1 Trial Issue (1986).
93. Xu Junming. “Preliminary Exploration of Land and Water Changes in Guangzhou.” *Journal of Sun Yat-sen University (Natural Science Edition)*, no. 1 (1978).
94. Yang Hongxun. “Architectural Restoration of Mu Xin Shrine in the Tomb of Fu Hao.” *Cultural Relics*, no. 6 (1988).
95. Yang Hongxun. “Hanyuan Hall of Daming Palace in Chang’an presumed to be a Five-Phoenix Tower in Structure.” *Cultural Relics World*, no. 5 (1991).
96. Yang Hongxun. “On the Shapes and Meanings of Ancient Writings  .” *Chinese Archaeology*, no. 7 (1994).
97. Yang Hongxun. “Study of the Restoration of Hanyuan Hall of Daming Palace in Chang’an of Tang Dynasty,” in *Collection of Essays Commemorating the 55th Anniversary of Su Bingqi’s Archaeological Findings.* Beijing: Cultural Relics Publishing House, 1989.
98. Zhejiang Cultural Relics Management Committee. “Excavation of the Majiabang Neolithic Site in Jiaxing City, Zhejiang Province.” *Chinese Archaeology*, no. 7 (1961).
99. Zhejiang Cultural Relics Management Committee. “Phase One Report on the Excavation of Hemudu Site.” *Acta Archaeologica Sinica*, no. 1 (1978).
100. Zhu Dexi, and Qiu Xigui. “A Preliminary Study of the Inscriptions on the Bronze Wares Unearthed in the Imperial Mausoleums of the Zhongshan State in Pingshan County.” *Cultural Relics*, no. 1 (1979).

Index

H. Yang, *The Archaeological Studies of Chinese Palaces*,
https://doi.org/10.1007/978-981-96-6174-9

G

H

I

J

L

M

P

R

S

T

W

X