Beside Yingzao: An Index of Chinese Building Traditions

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Beside Yingzao

An Index of Chinese Building Traditions

Tianyi Hang

A Thesis submitted to the faculty of the School of Architecture in partial fulfillment of the requirements for the degree of: Master of Environmental Design

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Abstract

*Yingzao* referred to the Chinese architectural practice prior to the nineteenth-century introduction of the term *jianzhu*, the translation of “architecture.” The earliest preserved illustrated government-issued building standard was titled *Yingzao fashi*. Published by the Southern Song government in 1103, *Yingzao fashi* defined and regulated technical terms used to describe imperial construction as well as specified the labor costs of certain building techniques. These terms inform our understanding of the traditional Chinese way of categorization and knowledge system of architecture and architectural elements.

Titled “Beside *Yingzao*,” this study takes the technical terms from *Yingzao fashi* to guide the reader in investigating the various connections between architectural knowledge (technical and non-technical) and its context from the perspective of the users rather than that of the builders. That is, I explore how concepts of architecture worked and interacted with cosmology, political theory, historiography, social division and collaboration in the imperial society. Built upon previous studies, I incorporate the discussions about building methods, architectural representation, and other relevant literary sources, in order to disrupt assumptions of both ideas about and material manifestation of traditional Chinese architecture.

This thesis is written in an “index” format: all chapters are independent of each other and have no pre-determined sequence. While each chapter focuses on a distinct aspect of premodern Chinese architecture, they all illustrate how non-technical architectural knowledge was constantly produced. The current study is organized into five chapters: *gongshi, quzheng, yan, jing*, and *dinggong*. Further, these terms are not exhaustive and cannot be read as a comprehensive analysis of premodern Chinese architecture. Complementing one another, these terms bring architectural knowledge in dialogue with the natural environment as well as the imperial Chinese sociopolitical environment.
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meishu chubenshe, 1955, 36.
Introduction

*Yingzao* 建造 means the activities of “building.” It was a common term for architectural practice before *jianzhu* 建筑, the translation of “architecture,” which was introduced in the late 19th century.¹ The earliest preserved government-issued specialized building standard was titled *Yingzao fashi* 建造法式 (YZFS). Published by the Southern Song government in 1103,² *YZFS* defined and regulated technical terms used to describe imperial construction as well as specified the labor costs of certain building techniques. While this document helped control government-funded construction budgets, it did not elaborate the cultural intentions or aspirations associated with their construction. Later Chinese imperial architectural treatises similarly recorded technical details; they were devoid of abstract terms such as *space* and *design*, which did not exist in traditional Chinese language.³ In their origins, historical writings employing the term *yingzao* were often concerned with the business and professional aspects rather than broader social meanings.

Because it served for government budget control, *Yingzao fashi* did not explain the purpose of making buildings, detail the process of building itself, or make comments on buildings. The *Yingzao fashi*’s beginning sections: “Kanxiang” 看詳 (Abstract) and “Zongshi” 總釋 (General explications) explain some major architectural terms, particular histories and various regulations.

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¹ This translation was done by Japanese scholars in the late 19th century. I need to study whether Chinese scholars did learn about the term *architecture* in the Ming or Qing dynasty. During the late dynasties, there were much scholarly communications on the continent because of the many European missionaries who had come to China.  
² *Fashi* 法式 means “standard,” that which local officials could refer to. It is the only extant building guide from that period, and it has been the subject of many studies on traditional architecture since the 1930s.  
³ Japanese scholars invented a Chinese term *kongjian* 空間 to translate the English term *space* in the late 19th century. *Kongjian* is a combination of two Chinese characters: *kong* 空 and *jian* 間. In traditional Chinese, each character was understood by its own meanings. *Kong* means emptiness, sky, air or exhaust; *jian* means interval, a certain period of time or volume or an architectural segment, bay or rhythm.
Even though they are still limited to a clerical understanding of construction, these listed terms offer insight and possible avenues of investigation to further explore their connotations.  

The present study, titled “Beside Yingzao,” takes the construction terms from YZFS to guide the reader in investigating a number of historical and architectural concepts. In particular, this research studies the relationships between architecture and nature, cosmology, and human beings in sociopolitical environments. By studying the technical terms extracted from YZFS, this investigation discusses building methods and materials, architectural representation, and other relevant architectural sources from a variety of archives in a more interactive way than structural rationale and significance. “Kaogong ji”考工记 (The Book of Diverse Crafts, 5th c. BCE) noted “when in the right season (i.e., time), and there is qi 氣 (i.e., appropriate qualities) on the ground, materials are great and craftsmen are skillful. When these four conditions joined together, then goodness could be achieved.” This quote indicates that building practice was like a kind of ritualized activity that needed collaboration from multiple sources. This research hopes to explore Chinese architecture in a similar manner in terms of dynamism.

In order to develop understandings of traditional architecture in China, this study brings together a variety of primary sources in conversation with the architectural terms mentioned in YZFS. By expanding the study beyond the technical manual, a clearer image of architectural practice emerges in which the business of building is not divorced from its art, makers, audiences, and sociopolitical/cosmological importance. The sources include huidian 會典 (digest of statutes), local gazetteers, dictionaries, encyclopedias, religious texts, poetry and prose. Visual evidence

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5 Architecture is ground-based and divinity is some place we cannot know.
includes literati paintings, religious paintings, maps, and illustrations in previously mentioned books. The well-preserved timber-frame imperial-style buildings around political and religious centers are my primary examples of research because imperial-style architecture was built by thoughtful builders of the highest skill, especially when funded by the government. These skills were not just about making exquisite decoration but rather about assembling complete and articulate architectural design that communicated well across various social groups.

Even though Chinese architecture was built similar building approaches for centuries, it was in continuous changes and as were understandings of architecture. This research does not intend to offer an overarching theory of Chinese architecture; instead, it presents a series of ideas derived from architectural terms, architectural details and their historical and conceptual contexts. Interpretation of one architectural feature is not one-dimensional. As the Chinese art historian Wu Hung observes in his study of Chinese tombs, the country’s architecture was able to “absorb other religious beliefs and practices to enrich itself.” A certain style or technique could be applied differently depending on contexts and therefore could take on different functions. For example, a Buddha hall could have a dragon-well ceiling that was similar to that of an imperial hall. While the dragon-well ceiling in a Buddha hall was developed from Buddhist cosmology—a paradise called “pure land” brought to China around the 4th century, the dragon-well ceiling of an imperial hall represented the communication between the emperor and divinity. Subtle enrichments like those observed in these buildings begin to reveal the architectural purpose of the larger structures that housed them, and the variety between them (both aesthetic and

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7 Including court-commissioned and for self-entertainment.
8 Most ceremonial architecture that followed government-issued building guides was categorized as imperial-style architecture. Even though temples built based on local beliefs performed differently from the imperial standard, select instances revealed the builders’ inclination toward a few spatial considerations and operations shared by both. Such local examples will be explored as part of the research.
10 Caisson ceiling may have a longer history than Buddhism in China and was attributed to religious meanings as Buddhism developed in China.
functional) reveals how a fragmented, indexical understanding of these features resists making the study of classical Chinese architecture monolithic.

This research will do the following: (1) draw connections between architectural terms and cultural, historical, religious, and political environments; and (2) clarify the nuances between traditional Chinese terms and modern Chinese architectural terms and their English origins. Many terms don’t have direct translation or single translation, but it helps further investigate the connections between architectural terms and its social connotations. At the same time, the translation of these terms will challenge conventional understandings of contemporary terms and concepts when compared to traditional Chinese concepts composed using a language of traditional terms. Borrowing from the fields of archaeology, the history of art, iconology, philology, and anthropology, this study will use technical terms from YZFS as passages/entries to a richer understanding of yingzao from its users’ perspective.

This thesis is done in an “index” format: all chapters/entries are independent of each other and have no pre-determined sequence. Each chapter tells a distinct aspect of premodern Chinese architecture. The current study is organized into five chapters: gongshi 宫室, quzheng 取正, yan 檐, jing 景, and dìnggōng 定功. Each chapter focuses on one architectural term extracted from YZFS. I had a longer list of terms selected from YZFS I wished to write about. This “index” format can allow me to add them in the future. These terms are chosen because of the accessibility of sources and dynamism of aspects seeing architecture through classical canons, visuals, building elements, and labor. Gongshi 宫室 refers to the premodern societal structure which separated theory and practice of architecture. Quzheng 取正 was a method about both seeing and being in the imperial world. Yan 檐 was the edge of architecture, a symbol of architecture and the name of space. Jing 景 was the harmonious poetic goal of a built
environment that derived from sunlight. *Dinggong* 定功 indicates the interaction between labor and its imperial supervisors. Importantly, though, these terms are not exhaustive and cannot be read as a comprehensive analysis of premodern Chinese architecture. Complementing one another, these terms bring architectural knowledge in dialogue with natural environment as well as the imperial Chinese socio-political environment.
Previous Studies

There are three main directions of research on Chinese architectural history noted by professor Yuan Zhong from South China University of Technology: (1) examining architectural evidence to explore its historical appearance, (2) seeking for cultural concepts expressed by architecture, and (3) investigating the connections between architecture and people’s activities in history.¹

The first direction has always been in the main focus, and usually includes studies of building techniques. This kind of research is the study of yingzao. In the late 19th century, survey work done by European scholars prompted research on Chinese architecture. In the early 20th century, after Le Jiazao’s 樂佳藻 pioneering writing about Chinese architectural history,² Chinese scholars formed a group called The Society for Research in Chinese Architecture 中國營造學社 to study traditional Chinese architecture. Its goal was to establish the field of study and to understand preserved buildings systematically.³ The surviving Song dynasty treatise Yingzao Fashi gave scholars a framework of architectural terms and methods from the 12th century. Archival research and surveys became the main methods for deciphering Yingzao fashi.⁴ By the end of the 20th century, Chinese architectural historians like Liang Sicheng 梁思成, Liu Dunzhen 劉敦楨, Fu Xinian 傅熹年, Pan Guxi 潘谷西, and Liu Xujie 劉敘傑 completed several important books on the general history of Chinese architecture. These books cover aspects such

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⁴ Wen Yuqing 溫玉清, “Er shi shiji zhongguo jianzhushixue yanjiu de lishi, guannian yu fangfa” 二十世紀中國建築史學研究的歷史, 觀念與方法 (Tianjin University, 2006).
as styles, archaeological dating, building methods, structure, decoration, and city planning. In recent years, increasing numbers of scientific studies, technological advancements, and digital tools have supported the study of Chinese architectural history. Preservation work using Lidar and digital photography has been able to generate more detailed data which scholars can use to date a building and analyze historical information.


In 2010, Hou Youbin 侯幼彬 further explored how Daoist philosophy was embedded in general architectural operations like modular design and plan. Aesthetic research usually looks for intentions of architecture by studying architectural patterns with cultural roots but is often devoid of the influence of historical political environment.

Previous research on Yingzao fashi also mostly focuses on technical details and their developments, but only a few care about cultures in terminology. The investigations of terms from a technical perspective include Yingzao fashi jiedu 營造法式解讀 (Explanations of Yingzao fashi) by professor Pan Guxi 潘谷西 in 2005, Yingzao fashi cijie 營造法式辭解 (Explanations on Terms in Yingzao fashi) by professor Chen Mingda 陳明達 in 2010. Previous scholars also made great achievements in exploring definitions and the history of terms. Professor Zhuge Jing 諸葛淨 wrote a series of essays about histories of architectural terms. In 2012, professor Feng Jiren 馮繼仁 from University of Hawai‘i wrote about metaphors of YZFS’s

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10 Cao Chunping 曹春平, Zhongguo jianzhu lilun gouchen 中國建築理論鉤沉 (Wuhan: Hubei jiaoyu chubanshe, 2003).
11 Yuan Zhong, Zhongguo gudian jianzhu de yixiangshua shengcun.
12 Wu Qingzhou 吳慶洲, Jianzhu zheli, yijiang yu wenhuo 建築哲理、意匠與文化 (Beijing: Zhongguo jianzhu gongye chubanshe, 2005).
14 Cheng Li 成麗, Song Yingzao fashi yanjiu shi 宋《營造法式》研究史 (Beijing: Zhongguo jianzhu gongye chubanshe, 2017).
15 Pan Guxi and He Jianzhong 何建中, Yingzao fashi jiedu 《營造法式》解讀 (Nanjing: Dongnan daxue chubanshe, 2005).
16 Chen Mingda 陳明達, Yingzao fashi cijie 《營造法式》辭解 (Tianjin: Tianjin daxue chubanshe, 2010).
terminologies associated with *dougong* （斗拱）（bracket sets）.\(^{19}\) He drew connections between architectural terminologies and their exact semantic meanings in order to suggest their aesthetic value. In 2020, professor Li Luke 李路珂 from Tsinghua University investigated the term *pingzuo* 平坐（the balcony on multistory buildings), suggesting that it was a kind of “god’s dwelling.”\(^{20}\)

In addition to drawing from this cultural and evidentiary work specifically about *YZFS* and Chinese historical architecture, my study is also inspired by the approach of English language scholarship about cultural terminologies. These studies include Rem Koolhaas’s *Elements of Architecture* (2014),\(^{21}\) Raymond Williams’s *Keywords: A Vocabulary of Culture and Society* (2015),\(^{22}\) Adrian Forty’s *Words and Buildings: A Vocabulary of Modern Architecture* (2004)\(^ {23}\) and Ambrose Bierce’s *The Devil’s Dictionary* (1906).\(^ {24}\) This project uses selected terms from *YZFS* to investigate their roles in architecture and approach traditional architectural theory from a dynamic perspective.

Departing from defining architectural terms’ technical significance in *yingzao*, this study aims to investigate the perceptions of cultural ideas drawn from these terms, which is third direction that professor Yuan Zhong pointed out. By consulting other primary sources like gazetteers and paintings, this study aims to complicate and enact our understandings of architectural terms in dynamic historical socio-political environments. The result does not offer a coherent theory but

provides threads of ideas from small to larger scope, ones which will collaborate with each other to loosely frame the concepts beside yingzao.
Background: Context on Sources

Architectural and environmental expressions are linguistic, visual, experiential, political and theoretical. In traditional Chinese, there was no overarching term for architecture until the late 19th century. Different kinds of architecture were named and categorized by their use but not by technical characteristics. They were mentioned in *huidian* (digest of statutes), local gazetteers, dictionaries, encyclopedias, religious texts, poetry and prose; and architecture was depicted in landscape paintings (including those which were court-commissioned), religious paintings, maps, and illustrations in previously mentioned books. *Huidian* were a type of official imperial document for a dynasty. They recorded the places for imperial ceremonies and court life. They regulated ranks of building associated with ranks of aristocratic titles. Local gazetteers recorded major buildings’ layout and history, which served as a reference book for local officials. There are also well drawn maps depicting layout and details of cities. Dictionaries list definitions of the terms associated with architecture as well as their history. Chinese encyclopedias (*leishu* 类书) were written for emperors in the earlier dynasties (starting from the 3rd century) and later in the Ming dynasty, more of them were produced and distributed to a larger population because of advanced printing techniques. Encyclopedias have specific sections about architecture but their content and categorization were not static. Religious texts talk about certain places for rituals. Poetry and prose record literati’s comments on architecture. Landscape paintings have a tradition of depicting architecture among trees and mountain peaks. A painting treatise titled *Jieziyuan huapu* 芥子園畫譜 from the 18th century notes architecture’s importance.

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2 Imperial governmental guides were called huiyao before the Yuan dynasty.
3 Cheng Guozheng 程國政 and Lu Bingjie 路秉杰, eds., *Zhongguo gudai jianzhu wenxian jiyyao* 中國古代建築文獻集要 (Shanghai: Tongji daxue chubanshe, 2016).
in paintings by saying architecture in a painting is like facial features of a human. Sometimes, architecture was the subject of a painting. Architectural images also served religious purposes such as that of setting a background for gods.

Our modern conceptions of architectural design and research in China were founded almost simultaneously in the 20th century. Before then, even though *yingzao* meant building practice, it did not connect to the “art of architecture” as in the European tradition. The creator of a building was not usually attributed to a single person. In traditional China, literati (a social class who could read and write; and usually served as government officials) also participated in the creation of architecture. In addition, architecture was imagined from historical records, a business of craftsmanship, and a medium in traditional social life. In order to read traditional architecture, modern scholars often use asynchronous terms like *jiegou* (structure) and *kongjian* (space) to interpret it (that is, architecture before it was called architecture). However, traditional architecture might have had its distinct language and knowledge system, that was an interaction between the historical, social, political and cultural conditions of the time.

Architecture was not an isolated and distinguished discipline, at least from the point view of literati. Instead, architecture was the focal point of many fields and thoughts embedded in various types of media. Architecture was also a virtual volume, the mimicry of life, a reverberation from nature. Architecture was hidden in the mountain and surrounded by trees. Its structure, was made by trees, its roof was made by earth and glazed by mineral color. Historically, architecture was a collection of information and was not an independent discipline.

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7 Scholars from the 20th century to present.
Architectural knowledge was recoded and transferred in various forms. Paper, silk and stone with written record and illustrations were permanent media and architecture was a temporary media. They influenced each other in the historical period. Many antique architectural regulations and examples were only recorded and inherited in the format of books. Literati held this kind of knowledge. But overall, this kind of knowledge was not sufficient to complete a construction. It is difficult to say how much of the constructional knowledge in Yingzao fashi was implemented in the Song dynasty but people (literati and artisans) from that time must have learnt architectural forms from built examples.

YZFS offers a bridge between conceptions and construction, because it was produced by literati to regulate construction. Its “Zongshi” 總釋 (General explications) chapter includes many architectural terms and provides archaic quotes about these terms This content and framework has potential for an extended conceptual reading: the purpose of building, the perceptions of building and the comments on building. Dynamic historical sources will also help us further explore the language in YZFS, and help us reconstruct what architecture meant not only to its builders but also to its original patrons and users. This kind of language tool will guide our reading of architectural examples, and these examples will further annotate the language. This thesis does not merely provide definitions for these terms but looks for connections between historical evidence about architecture and its sociopolitical connotations. By further putting historical terms and concepts in conversation with contemporary terms, this research will

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8 Written record about architecture can be traced to the Zhou dynasty (ca. 5th c. BCE) but timber-frame architecture was not preserved for that long time. Before the invention of photography, architecture can be recorded by writing and drawing.
10 Yuan Zhong suggests that language carries our understanding of architecture. He talked about imaginary existence of architecture in Chinese characters, literatures, pronunciations, and symbols. He framed an overarching narrative about various sources but I will investigate further in this thesis with a series of examples. See Yuan Zhong 袁忠, Zhongguo gudian jianzhu de yixianghua shengcun 中國古典建築的意象化生存 (Wuhan: Hubei jiaoyu chubanshe, 2004): 206.
consequently challenge modern assumptions about the field and reimagine the way we interpret architecture.
**Gongshi 宫室 (architecture)**

A manifestation of socio-political relationships in imperial China

*Gongshi 宮室* was the most overarching term for architecture in traditional Chinese literati culture for over 2 millennia but it cannot be translated exactly to *architecture*. *Gongshi* was the most common title for the sections of built environment in *leishu 類書* (Chinese encyclopedias). But it is never the meaning of “art and science of building” nor is it about the action of *building*. *Gongshi* was a term of conceptions of space and a manifestation of sociopolitical relationships in imperial China. In contrast to metaphysical relationships represented by *gongshi*, the actual labor and techniques of artisans in constructing physical spaces was known as *yingzao 营造* (could be used as a verb and a noun). In neglecting *gongshi* in the history of architecture in China, scholars overlook the two essential components that defined architecture theory and practice respectively by social reality, for millennia.

Even in the 12th century at which point the Song imperial government sought to regulate the practice and profession of architecture, concepts of *gongshi* remained essential to those texts to guide the literati readers to the field of architecture. In *Yingzao fashi 营造法式* (Regulations in buildings, hereafter *YZFS*), an edictal book designed to focus on constriction, *gongshi* was the first concept in its first section: “Zongshi” 总释 (General explications).

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1 *Leishu* (usually translated as traditional Chinese encyclopedias/reference books), compared to European encyclopedias, is more focused on the transmitting classical literature as well as cataloging and updating into a knowledge categorization. The majority of the format is usually summaries and quotes from other books selectively. As a result, *leishu* provides a chance for us to understand how *architecture/buildings* was categorized and understood by traditional literati. See Zhao Hankun 赵含坤, ed., *Zhongguo leishu 中国类书* (Shijiazhuang: Hebei renmin chubanshe, 2005). Benjamin Elman describes it as a museum of texts. See Benjamin Elman, “Collecting and Classifying: Ming Dynasty Compendia and Encyclopedias (Leishu),” *Extrême-Orient Extrême-Occident*, March 3, 2007, 131–57.


3 When *yingzao* was used as a verb, it meant “to build.” In historical text, *yingzao* and *gongshi* sometimes were used together in one sentence: *yingzao gongshi* meant “to build architecture.”
By surveying the history of this term, this chapter maps the literati’s system of knowledge in architecture through *gongshi*’s etymology, its relationships with social structure, imperial ideological construction, and literati’s scholarship. By doing so, I suggest that the shifting uses and meanings of the term *gongshi* prior to and during the imperial period in China reflect the changing contemporary sociopolitical relationships to writings about space and place. More specifically, *gongshi* served as a tool for literati scholars to differentiate historical periods and later became a strategy by which emperors and Confucian scholars managed their respective positions in imperial society. However, given this context, *gongshi* did not encapsulate the full spectrum of architectural praxis as practiced by artisans themselves. Thus, the study of the divergences between *gongshi* and *yingzao* also enable us to understand the social and practical differentiation between literati and artisans.

### Previous Scholarship

Modern architectural scholarship in China has been built on the modern translation of *architecture*, which is *jianzhu* 建筑 in Chinese since the late 19th century.⁴ In the early 20th century, Zhu Qiqian 朱啟鈞, the founding father of the study of Chinese architectural history, tried to find the roots for the various kinds of modern professions by reframing respective traditional craftsmanship. He named the Society for the Study of Chinese Architecture as

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⁴ The term *jianzhu* 建筑 existed in traditional Chinese but not in use very often and mainly refers to building cities (city walls) specifically. Architecture was translated as *jianzhu* by Japanese scholars into Chinese in the late 19th century. See also Xu Subin 徐蘇斌, *Jindai zhongguo jianzhuxue de dansheng* 近代中國建築學的誕生 (Tianjin: Tianjin daxue chubanshe, 2010), 25-36.
Zhongguo yingzao xueshe 中国营造学社，\(^5\) which indicated that he thought the modern profession of jianzhu stemmed from the yingzao tradition.

For a short period of time in the 1920s, when the professional architectural education established in China at the early stage, the Department of Architecture has been called jianzhu xi 建筑系 (xi means department), and *gongshi* was only a specific term for premodern architecture. The pioneer of the studies of Chinese architectural history, Liang Sicheng 梁思成 taught “History of Gongshi (in China and Foreign Countries)” at Northeast University in the late 1920s.\(^6\) Tsinghua University’s Department of Architecture was called yingjian xi 建筑系 (yingjian, an alternative name of yingzao, was more nostalgic compared to jianzhu) in the beginning (1928-1930) which was also influenced by Liang Sicheng’s historical research with the establishment of the professional education in college. But not for very long, in 1946 when Liang Sicheng reframed the curriculum at Tsinghua, the terms yingjian and gongshi faded out in the studies of architecture, and courses of architectural history was called jianzhu shi 建筑史 (shi means history).

The influence of the modern profession of jianzhu (yingzao for the historical studies) caused the significance of gongshi, which represented the architecture’s relationships with sociopolitical environment, has been neglected, and so that the current understanding of gongshi is incomplete. Currently, gongshi is usually understood and translated as “palace” by scholars and the general public.\(^7\) Current research of gongshi does not treat gongshi as an independent study but rather

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positions it as a supplement to *jianzhu*, a part of Chinese classic literature study or historical analyses of imperial palaces.

Architectural historians usually studied traditional architecture from the perspectives of *yingzao* (the architectural practice) and neglected *gongshi*. Architectural historian Zhuge Jing 諸葛淨 studied historical texts of *jianzhu* and *yingzao* in order to find building traditions but only focused on the building practice.⁸ Xu Subin 徐蘇斌 has surveyed the traditional architectural knowledge in *Gujin tushu jicheng* 古今圖書集成 (the imperial *leishu* published in the 18th century), more specifically that of the section *kaogong dian* 考工典, but he still tries to reframe traditional knowledge in a modern disciplinary framework.⁹ In his scholarship, he has argued there was no equivalent concept of *jianzhu* as a profession in traditional Chinese as well as the Confucian knowledge system. However, his emphasis on the profession of architecture limited his understanding for architectural thinking in the imperial time. Master student Wang Fangjie 王方捷 at Tianjin University surveyed the contents in various *leishu* that entitled *gongshi* in his thesis but mainly focused on the traditional philosophy of dwelling without a thorough understanding of the term *gongshi* itself.¹⁰

Another aspect of research about *gongshi* has mainly focused on its definitions in classical literatures but not its influence in history.¹¹ Philologist Hong Chengyu 洪成玉 surveyed many texts about *gongshi* but only explained its literary meanings.¹² As archaeological evidence has

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10 Wang Fangjie 王方捷, “Guoxue shiye xia de zhongguo chuantong jianzhu lilun” 國學視野下的中國傳統建築理論 (Tianjin University, 2013).
been found over the last century, ancient palaces (known as *gongshi* in historical texts) have been studied and reconstructed by cross referencing with the classical literatures.\(^{13}\)

However, traditional knowledge of architecture has its own logic and development. *Gongshi* has a much broader sense of architecture from a theoretical point of view with its social significance. The concepts of traditional architecture and how they came into being were embedded in *gongshi*, and *gongshi* needs to be studied in order to reconstruct the historical understandings of architecture within its social context. At the same time, *Gongshi* does not cover everything we call architecture today because of its etymology as well as the Confucian emphasis of *li* (societal orders) since the start of the imperial period. The reasons and ways that architectural knowledge interlocked with the Confucian thoughts also need to be explained.

**Gongshi: space and place**

*Gongshi* was the closest term to *architecture* in traditional Chinese. It represented the material basis of architecture but it does not match the meanings of *architecture* in English. Instead, it informed spatial and social relationships with nuanced meanings embedded in the characters: *gong* (宮) and *shi* (室). Thus, gongshi is not an “art and science” developed from practice but concepts of space.

*Gong* and *shi* both had the spatial considerations with different emphases. *Er ya* 焉雅 (the first Chinese dictionary) from the 3rd century BCE, quoted by *YZFS*, noted that the characters *gong* and *shi* had the same meaning and they were interchangeable.\(^{14}\) A later dictionary *Shi ming* 釋名

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\(^{14}\) Hou Youbin uses *you* (existence) and *wu* (emptiness) to illustrate space in Chinese architecture. *Daodejing shiyi*. 
(Explanation of Names) from the Han dynasty offered a further explanation (also referenced by YZFS):

Gong is the enclosure from above. Houses are seen on platforms; the enclosure is impressive. Shi is contents. It means people and things fill the inside.

More specifically, Shi ming points out that gong 宮 is the space enclosed (enclosure, boundary and container), and when it is filled with households (belongings and content in that space), it becomes shi 室. I translate shi as “place” in English. This explanation in dictionary about the difference between the two has lasted 2 millennia.17

Compared to architecture, gongshi has spatial indications in its origin, which is conceived theoretically rather than practically. Gongshi, a noun in the very beginning, is imbued with the sense of space, and very different from architecture, in the Oxford English Dictionary (OED), which is defined as “the art or science of building” and “the action or process of building.”18 Architecture is derived from the Latin architectus and Greek ἀρχιτέκτων (architect), ἀρχι + τέκτων, and represents the outcome from a practice. Τέκτων is also used in other contexts, such as works by poets and metalsmiths, so it is the art and skill of producing something: (both material and immaterial). In this sense, architecture is more inclined to practice, but gongshi

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15 Li Jie, Yingzao fashi, juan 1, 2a. Tao Xiang 陶湘 edition.
17 An imperial dictionary from the 17th c. Kangxi zidian 康熙字典 records this meaning of this term as well. Gongshi does not necessarily mean one building.
points to another direction of perception. That is, the subject of gongshi is formed not as built and produced but as conceived in space (even socially). The distinction here is that gongshi reflects and describes space based on social reality and “architecture” reflects production. From its origin, gongshi was not intended to describe a professional nature, but rather directed readers to the theoretical, spatial, and social nature of architecture. Even though gongshi was a term for material basis of architecture, it was abandoned after the establishment of the profession of architecture (jianzhu 建筑) in the 19th century, because it never represented a profession and conflicted with a knowledge system built upon professions.

Gongshi implies that there was an alternative conceptualization of architecture, which is more societally related and not profession-oriented like today. The overshadow of yingzao in the research of traditional architecture overlooked how the concepts of architecture were framed and functioned in the larger socio-political environments of traditional China.

**Gongshi and Pre-historical Narratives:**

**Confucian Knowledge Formation of the Chinese Civilization**

The transitions of the descriptions of the living environments represented the construction of cultural identity. This kind of historical narrative was constructed by Confucian scholars and transmitted and reinforced by later generations of literati. In this fable, the first built environment—as well as the first recorded instance of gongshi—was a marker of civilization.19 The following well-known sentence from “Commentary to the Appended Phrases” (“Yi Xici” 易経), a Confucian canon, from the 2nd century BCE is quoted in Yingzao fashi as the first

19 Sun Zongwen 孫宗文, Zhongguo jianzhu yu zhexue 中國建築與哲學 (Nanjing: Jiangsu kexue jishu chubanshe, 2000), 66.
sentence of the entry of gong and many leishu as the beginning sentence of the section of gongshi:

In remote antiquity, caves were dwellings and the open country was a place to stay. The sages of later ages had these exchanged for proper houses (gongshi), putting a ridgepole at the top and rafters below in order to protect against the wind and the rain.20

上古穴居而野處，後世聖人易之以宮室，上棟下宇，以待風雨。21

Here, gongshi entitled the first built places in history which replaces caves to provide a safe place to protect humans. Another Confucian canon “Liyun” in the Book of Rites (Liji 禮記) (2nd c. BCE-1st c.) also stated a similar idea and gave more details about the historical transition:

In ancient times (the time of early kings), there was no gongshi. In winters, (people) lived in caves, and in summers (people) lived nests. There was no use of fire. (People) ate fruits and flesh, drank blood and took fur. There was no linen and silk. (People) wore feather and fur. Later, the sages created these, took advantage of fire, casted metalware and made earthenware. And then they made taixie (architecture on a high platform), gongshi, and youhu (doors). (People) toasted, grilled, baked and made must and sauces. (People) used flax and cocoon fiber to make linen and silk, to serve the live and the dead, as well as the ghosts and the gods. All later history came from here.

昔者先王，未有宮室，冬則居覆窟，夏則居樑巢。未有火化，食草木之實、鳥獸之肉，飲其血，茹其毛。未有麻絲，衣其羽皮。後聖有作，然後修火之利，范金合土，以為臺榭、宮室、牖戶，以炮以燔，以亨以炙，以為醴酪；治其麻絲，以為布帛，以養生送死，以事鬼神上帝，皆從其朔。22

21 Li Jie, Yingzao fashi, juan 1, 1b.
22 Liji 禮記, in Shisanjing zhushu 十三經註疏 (Beijing: Zhonghua shuju, 2009), juan21, 3066.
Gongshi is the starting point of buildings, as it describes, which, alternatively speaking, is the origin of architecture. In this context, gongshi means a “sudden” change of the environment for humans, that is considered a properly built place and a preferred living place. Although these are old literature from the 2nd century BCE, the sentence was widely accepted and repeated by generations of literati in leishu at least starting from the Tang and Song dynasties (7th – 13th century) until the late imperial period.

This kind of idea of proper (timber-frame) architecture that distinguished and developed from pre-civilization lasted for millennia. Evincing this context-specific historical relationship between space and concepts of civilization is an excerpt from French Jesuit Ferire Attiret. In the 18th century, he noted that Chinese people were surprised by pictures of masonry residential architecture in Europe.23 Masonry buildings for 18th century Chinese people were like mountain cliffs with holes, where bears and wild animals live.

Even though we don’t know if the term gongshi was invented by the first group of civilized people, the Confucian narrative of the history has been transmitted for over 2 millennia in which gongshi was a major indication of that historical moment when civilization and thus, cultural identity, had been established.

Gongshi and Political Structure:

Confucian Knowledge Formation of the Chinese Empire

Another major transition in the history of China was the establishment of the Chinese empire from the earlier Warring States period. Even though the Han dynasty was the second imperial

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dynasty, it reconstructed the society and ideology much more thoroughly than the previous Qin dynasty. *Gongshi* played an important role within the social-political constructions of a new form of centralized state power as well as its political negotiations with another new political power, Confucian-officials.

First, under the new political theory created by Confucian scholars, *gongshi* became the name of the palace exclusively in order to form the exclusiveness and authority of the central power. Second, while the theory of *wuxing* (Five Phases) was a tool for the Han court tried to convey that it got the authority of governance from the Zhou royal house, which is a political transition resembles cosmic agents of change.24 *Gongshi*, the construction of palace, became an element within the constant-changing political conditions between the emperor and people. Thus, it was made a political weapon/symbol by Confucian-officials to protest political issues.

From the early architecture discussed above, *gongshi* became an exclusive title for imperial palaces constructed by the Han empire. This is the reason why modern translation only takes its meaning of imperial palace.25 In short, the elevation of *gongshi* marks the beginning of imperial China. While *YZFS* explained original meanings of *gong* as discussed above, it talks about this transition towards an exclusive use by quoting *Fengsu tongyi* 風俗通義 (*Comprehensive Meaning of Customs and Mores*) from the 2nd century:

> From the earliest time, *gong* and *shi* are one and the same. It (*gongshi*) has been used for noble people from the Han dynasty, and common people avoided to use it.

自古宮室一也。漢來尊者以為號，下乃避之也。26

24 The developed political theory defined Han as Fire and Zhou as Wood, so Han was derived from Zhou.
25 Some Daoist temples are named as *gong* as well.
26 *Yingzao fashi*, juan 1, 2b.
Gongshi had become reserved for court use only since the Han dynasty. This meant that from the Han dynasty, non-court family could not build architecture that called gongshi. More specifically, only imperial palaces’ names could have the character gong in it. But the term gongshi was still a literati term for all kinds of buildings without calling any specific building as gong except imperial palaces. This transition was widely acknowledged and Yuhai 玉海, a contemporary leishu of YZFS (12th c.) gave a more explicit narrative in the first few sentences of the gongshi section:

In ancient times, both high-rank and low-rank living places could be called gong. Since the Qin and Han dynasty, it was set to name only the most noble living places.

古人貴賤所居皆得稱宮。至秦漢以下，乃定為至尊所居之稱。27

Understanding the time-specific meanings of gong allows us to understand how political history was narrated and understood. Gong, once again, became the indication of time in literati’s narrative of political history. As discussed earlier, gong was a sign of civilized settlements; and here, separated the time before and after the Qin and Han dynasties. Earlier texts provide evidence for this transition. For example, “Quli”曲禮 (Summary of the Rules of Propriety) from the Warring States period (475-220 BCE) stated gongshi was the architecture of noble men:

If junzi (noble men) build gongshi, the first will be the ancestral temple, the second will be the storage and stable, and the third will be the living place.

君子將營宮室：宗廟為先，廬庫為次，居室為後。28

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28 Liji 禮記, in Shianjing zhushu 十三經註疏 (Beijing: Zhonghua shuju, 2009), juan 4, 2724.
Before the Qin dynasty, *gongshi* was versatile and included temples, facilities and buildings for living. The “Shan guo gui” 山國軌 (Using Statistics to Control State Finances) in *Guanzi* 管子 of the same period also recorded *gongshi* as a universal term for well-built architecture:

“If you use your handling of salt and iron as the basis for utilizing statistics,” said Guanzi, “it will result in the value of the grain you have in storage being increased tenfold. Of this, 90 percent will be retained by the prince, but his people, having sufficient food and clothing, will perform their labor service. All below will be peaceful and there will be no resentment or criticism.”

“When you eliminate taxes on their land by placing taxes on mountains, wealthy families that provide their relatives with lavish funerals will pay huge fees, while poor families that are frugal in this respect will pay only small ones. Wealthy families that build elaborate, palatial mansions (*gongshi*) will pay huge fees, while poor families that live in cottages and thatched huts will pay only small ones. When the government on high institutes a system applying statistics to state finances, the people’s poverty and wealth will be kept on a tether. This is what is meant by using statistics to control state finances.”

管子曰：「鹽鐵撿軌，榖一廛十，君常操九。民衣食而繇下，安無怨咎。去其田賦，以租其山。巨家重葬其親者，服重租。小家菲葬其親者，服小租。巨家美修其宮室者，服重租。小家陋為室廬者，服小租。上立軌於國民之貧富，如加之以繩，謂之國軌。」

Even though Guan Zhong also mentioned *gongshi* a few times in which *gongshi* was associated with the kings, he did not avoid the non-court use. Architecture built for local land lords and rich merchants was called *gongshi*.

The political environment in the Qin and Han was completely different from that of the pre-Qin period. Officials appointed by the emperor replaced the local landlords and became rulers of the local governments. The state power got much more centralized and the emperors’ authority got

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30 *Guanzi Jiaozhu* 管子校註 (Beijing: Zhonghua shuju, 2004), juan 22, 1297.
enhanced than any period before then. Gongshi did not only serve as a name for the palace but also was embedded in the imperial ideology of the emperor’s power and position. Wang Chong 王充 (27 – c. 97 CE) in his Lun heng 论衡 (Critical Essays) also noted:

The Spirit of Heaven dwells in heaven just as a king in his residence. A king lives behind many gates, therefore the Spirit of Heaven must stay in some secluded place likewise. As the king has his palaces and halls, Heaven also has the T’ai-wei [Taiwei], Tse-kung [Zigong], Hsan-yuan [Xuanyuan] and Wen-ch’ang [Wenchang] mansions.31

天神之處天，猶王者之居也。王者居重闕之內，則天之神宜在隱匿之中；王者居宮室之內，則天亦有大徵、紫宮、軒轅、文昌之坐。32

In this passage above, Wang Chong recognized the contemporary political theory tended to associate gongshi with the emperor to match the center of the cosmos in order to theorize the power legitimacy. From this perspective, gongshi was used in a unique, exclusively imperial context of divine connection. Gongshi functioned as a part of this ideological construction and power-legitimization of the Han.

As gongshi was promoted to the top of the imperial hierarchical system, it became very much tied to political environments. While grand gongshi could be a symbol of strong state power, it also could be a sign of spending too much money for an unnecessary luxury lifestyle. In historical records, there was a debate between Liu Bang 劉邦 (the first emperor of the Han Empire) and his prime minister Xiao He 蕭何. Xiao He wanted to build great gongshi for the empire but Liu Bang was very angry because he thought that may cause too much burden on the population. Xiao He responded, “only grand (gongshi) can reinforce the majesty (of you and the

31 This passage was translated by Alfred Forke and modified by author. See Ch’ung Wang, Lun-Hêng, trans. Alfred Forke. (Leipzig: O. Harrassowitz, 1911), 71-72.
32 Wang Chong 王充, Lun heng 論衡 (Beijing: Zhonghua shuju, 1990), juan 6, 301.
This conversation indicated a conflict of building gongshi. One side is the building gongshi and its counterpart is building less gongshi, which is bei gongshi. Building less gongshi was also a sign of simple life which represented the emperor’s high morality. These two sides also reflected the political structure (emperors and Confucian-officials) throughout the Chinese imperial history.

High morality was the basis of power legitimacy in Confucian political theory. Usually, the founder of the empire was depicted in history as the one who loved people with high morality. In this story above, Liu Bang was the great emperor who did not want build great gongshi. However, this kind of conversation occurred many times in history, but more often at the time when Confucian officials were criticizing the emperors of later generations. In the contemporary Confucian texts, gongshi was also referenced in the stories of massive construction of palaces causing societal issues and served as a tool for political critique. Invoking the excessive construction of gongshi was a means to warn the emperor and ask the emperor to be conservative in construction, or, to carefully assess the empire’s capacity for construction. Therefore, although this term was often associated with the top-down power of the imperial court, it also referred to a more universal moral imperative.

Confucian scholars thought bei gongshi (less palace-construction) was an important condition for constructing an ideal society. Many scholars in the pre-Qin period had promoted the idea of bei gongshi, but the idea was not “adopted” or put into such high-level use by the court until the Han dynasty. Bei gongshi became a moral expectation for the emperor from an ideal condition. That meant, if an emperor considered the expense of building palaces, it was a sign of his love to people.

33 Sima Qian 司馬遷, “Gaozu Benji” 高祖本紀, in Shiji 史記 (Beijing: Zhonghua shuju, 1982), juan8, 386.
In the ancient period, construction required acquiring labor from the population which typically meant peasants. If too many people worked for imperial constructions, there would be less people in agriculture. The loss of peasants in the society not only caused the reduction of food production, but also caused unhappiness among people. Therefore, Confucian scholars believed less construction would help maintain the stability of society.

In Confucian teachings, imperial power’s legitimacy came from the Noble Kings of ancient times. Later emperors should follow the Noble Kings’ moral values. “Taibo” in *Lunyu* 論語 (480-350 BCE) records the statement by Confucius about good personalities of a leader:

Confucius said: “I have nothing negative to say about Yu. He ate and drank simply but made a lot of effort to worship ghosts and gods; he dressed simply, but prepared decoration in rituals; he lived simply (bei gongshi), but did his best to build water conservancy projects (for people). I can find nothing like a flaw in Yu”

子曰：「禹，吾無間然矣。菲飲食，而致孝乎鬼神；惡衣服，而致美乎黻冕；卑宮室，而盡力乎溝洫。禹，吾無間然矣。」

Here, Confucius praises Yu (one of the ancient Noble Kings) about his love to people over his love to himself. *Bei gongshi* is a sign of his virtue.

In the process of power legitimization and reframing Confucian teachings, Dong Zhongshu 董仲舒 (179-104 BCE) further developed Confucius’s idea of *bei gongshi* in his writing. In the chapter “Wuxing xiangsheng” 五行相勝 (The Mutual Conquest of the Five Phases) within

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34 *Lunyu* 論語, in *Shisanjing zhushu* 十三經註疏 (Beijing: Zhonghua shuju, 2009), juan 8, 5403-5404.
**Chunqiu fanlu** 春秋繁露 (*Luxuriant Dew of the Spring and Autumn Annals*) Dong explained the application of *gongshi* and its metaphor as an element in the theory of *wuxing*:

Earth [corresponds to one of] the ruler’s officials. Its counterpart is the minister of public works. If the minister of public works treats the ruler as if he were a deity, whatever the ruler does, he will support; and whatever the ruler says, he will praise. He will comply with the ruler’s precepts, listening and following him to win favor. He will promote whatever the ruler praises to satisfy the ruler’s desires. He will lead the ruler into depravity and corrupt him with unrighteous principles. How grand will he make palaces and halls (*gongshi*); how numerous will he make terraces and towers, with carved ornaments, inlaid with gold, and radiant with the five colors. [But] his taxes and levies will know no limits, robbing the people of their livelihood. He will increase military expeditions and corvée labor, robbing the people of their time. He will engage the people in limitless projects, robbing them of their strength. [Consequently,] the common people will grow distressed and rebel or flee from the state. King Ling of Chu exemplifies this. He built the watchtower at Qianxi, and after three years when it still was not completed, the people were so exhausted that they revolted and assassinated him. Earth [corresponds to one of] the ruler’s officials. [Wood corresponds to the minister of public works.] When the ruler is recklessly extravagant, exceeds the proper limits, and loses [his sense of] propriety, the people will rebel. When the people rebel, the ruler will be lost. Thus, it is said: Wood conquers Earth.\(^{35}\)

土者，君之官也。其相司营。司营為神，主所為皆曰可，主所言皆曰善，順主指，聽從為比。進主所善，以快主意，導主以邪，陷主不義。大為宮室，多為台榭，雕文刻鏤，五色成光。賦斂無度，以奪民財；多發繇役，以奪民時，百姓罷弊而叛，及其身斂。夫土者，君之官也，君大奢侈，過度失禮，民叛矣。其民叛，其君窮矣。故曰木勝土。\(^{36}\)

Dong developed the benefit of moral value to a part of political and cosmological nature. Dong theorized the logic of negative consequences of building a lot of *gongshi* to be conceived as a

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\(^{36}\) Dong Zhongshu 董仲舒, “Wuxing xiangsheng” 五行相勝, in *Chunqiu fanlu* 春秋繁露 (Shanghai: Shanghai shudian chubanshe, 2012), juan 13, 175.
part of cosmic agents of change. Dong pushed this theory further from a political observation but claimed it as part the natural process that everyone (both emperors and normal people) must obey. In that sense, Dong was actually warning and even threatening the emperor about the power of people, of which the term gongshi became a political term which was a media of measure the emperor’s love given to people. This measure was “controlled” and judged by Confucius scholars like Dong.

Therefore, bei gongshi is not only, or not exactly, about the conservative aesthetics and virtues as many scholars have stated, but a tool of governing, or at least a political slogan by the emperors and Confucian officials. Since the construction of the Chinese empire, this political tension between Confucian scholars and emperors emerged. Gongshi was for the emperors to claim their legitimacy of power by claiming their love of people like the ancient kings did. At the same time, Confucian scholars also gained the power of assessing this moral standard of bei gongshi in the political context. This moral weapon was for the Confucian scholars to fight against power of emperors. If they thought the emperors’ actions were wrong, they could challenge the emperors’ authority of power by arguing the emperors’ action did not match the ancient kings’ and the emperor’s love to people did not match the ancient kings’ love. For example, Hai Rui 海瑞 in the Ming dynasty blamed the emperor in 1565 of overlooking people’s lives though the construction of his famous memorial to the emperor titled “Zhi an shu” (The Memorial of Public Order), “Building gongshi, it is what the Ministry of Works tried its best to manage; looking for incense and treasures, it is what the Ministry of Revenue was requested for. You mistakenly requested and officials mistakenly followed, there was no one to tell you the right thing to do” 建

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Gongshi played an important role in the historical and political construction of the tradition China. In Confucian narratives, it marked the transition from uncivilized to civilized. Then, in this transitional period from the Warring States period to the imperial period, gongshi once again marked the radical change of social conditions and structures. The controlled use of gongshi (the supreme name of architecture) was a sign of the centralized monarchy and a part of the establishment of imperial ideology and culture, and gongshi became a tool for Confucian scholars to judge and advise the leadership. Even though it seems to replace gongshi by architecture to talk about these histories because these conceptions were derived from ancient architecture and imperial palaces, architecture lacks the nuance consistently connected with social backgrounds in writing and thinking.

**Gongshi and yingzao:**

**knowledge systems and the imperial social structure**

As mentioned above, gongshi did not imply a profession of building from its original meanings, but rather a social conception of architecture. Yingzao (both a noun and a verb) was the term for building practice. They both represented distinctive knowledge systems of architecture that were used and developed by different groups of people. The study of gongshi clarifies the differentiations of classification of architectural knowledge: (1) architectural features, functions, forms from users’ (literati-officials) perspectives and (2) techniques of making architectural features from builds’ (artisans) perspectives.

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Knowledge of *yingzao* (the profession of architecture) and *gongshi* were separate in historical social contexts, and they are controlled by different social groups: artisans and literati. The author Li Jie 李誠 of *Yingzao fashi* reported to the court in the *zhazi* 制子 that he produced this book by examining old books and recording artisans’ words.\(^3\) Even though *yingzao* as the title of the book was the overarching term here, Li Jie still separated the information about *gongshi* and *yingzao* into different chapters as his two distinctive sources: literati and artisans.

*Yingzao fashi* reframed the knowledge of architecture in the Song dynasty under its blooming economy with other cultural projects.\(^4\) Prior to the knowledge-categorization projects, *leishu*, the knowledge of *gongshi* was scattering in classic literatures and dictionaries.\(^5\) *Leishu* organized the literati’s knowledge of architecture and its compilations revealed the framework of their thinking about architecture. Imperial-commissioned *leishu* tried to be the most inclusive, and *Taiping yulan* 太平御覽 (*Readings of the Taiping Era*) was one such work ordered by Emperor Taizong during the early Northern Song. Compared to sections of architecture within *Taiping yulan*,\(^6\) *Yingzao fashi* reveals its strong connection with and extension from the

\(^3\) Li Jie, “Zhazi” 制子, in *YZFS*.

\(^4\) Taizong promoted cultural development while stopped its over support to military (*xiuwen zhige* 修文止戈) at a time of peace in the Song empire. See Jiren Feng, *Chinese Architecture and Metaphor* (Honolulu: University of Hawai’i Press, 2012), 79.


\(^6\) *Taiping yulan* does not exactly name the section of architecture as *gongshi*, instead the book calls it *juchu* 居处 (places for living). But it does not reduce the importance of *gongshi* at all, and does not make *Taiping yulan* less valuable in comparison. The name *juchu* was preferably used in the earlier dynasties such as Tang and Song dynasties. Sometimes writers combine two terms together as *gongshi juchu*, which means these two names had the same meanings. As discussed above, even though *gongshi* was reserved for using naming imperial buildings specifically, *gongshi* still serve a broader sense of architecture without naming any specific kind of buildings as *gongshi* besides imperial palaces. Many Song-dynasty *leishu* like *Wenyuan yinghua* 文苑英華 (987), *Shiwu jiyuan* 事物紀原 (1078-1085), *Guojin hebi shilei beiyao* 古今合璧事類備要 (1256), *Yu hai* 玉海 (13th c.) and *Shi lin guang ji* 事物廣記 (13th c.) title the section of architecture as *gongshi*. See Zhang Guodong 張國東, *Songdai leishu zhi yanjiu* 宋代類書之研究 (Taipei: Huamulan wenhua gongzuo fang, 2005), 73-147.
imperial knowledge system of literati. Its innovation lies on reframing architectural knowledge and functioned as a communication tool between literati-officials and artisans.

*Yingzao fashi* was compiled by referencing classic literature as well as constructional experience learnt from artisans. The chapters titled “Zongshi” 總釋 (General explications) resemble literal works in *leishu*. In the section of “Kanxiang” 看詳, the author Li Jie wrote: “The information in *Yingzao fashi* is examined and selected from various books in classic literature and history, in order to make the regulations match what the classic literature required” 係於經史等群書中檢尋攷究, 至或制度與經傳相合, which implied again the duality of construction and architectural theoretical conceptions. The content and format of the “Zongshi” section is like that of *leishu*. Two chapters of “Zongshi” bridged the constructional details in *YZFS* and the imperial literati knowledge system about architecture. Even though *yingzao* became the title because it was the main purpose, *gongshi* still led the “Zongshi” section in order to manifest the literati readers’ identity and authority in building.

*Yingzao fashi* pivots from *leishu* in its specialization in building. Even though there are parallel terms in *YZFS* and the imperial *leishu*, *Taiping yulan* (984), which Li Jie might have had the opportunity to consult, Li Jie reorganized the terms by different kinds crafts like structural timber work, non-structural timber work, masonry, tile making and etc.

*Yingzao fashi* makes the knowledge of the construction side of architecture accessible to the contemporary literati. First, *YZFS* has the same beginning phrases as that of *leishu*. In *YZFS*, the first few entries: *gong* 宮 w/ *shi* 室, *que* 闘, *dian* 殿 w/ *tang* 堂, *lou* 樓, *ting* 亭, and *taixie* 台榭

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43 Li Jie, “Kan xiang,” in *YZFS*.
44 Feng, *Chinese Architecture and Metaphor*, 80-85. Feng talks about *Taiping yulan* as a cultural preparation of terminology for the compilation of *YZFS* but neglects *YZFS*’s innovation in reframing architectural knowledge.
resemble the first few entries in sequence in Taiping yulan: gong, shi, dian, tang, lou, tai 台, and que. These terms mean different types of architecture of its form except gong. Que is the gate of imperial palaces. Dian is the main halls. Lou means multistory buildings. Ting means pavilions. And taixie means architecture on high-raised platforms. And these terms are merely recorded in the “Zongshi” section but no other chapters of YZFS. That means, even though Li Jie did not intend to introduce the exact constructional methods of these types of architecture, he still included this information to be the very beginning of the book like leishu. This organization does not only indicate that this book served literati in order to clarify a few concepts in the beginning, but also further implies that the following information of the book has a connection with leishu. This kind of succession of format and content from leishu made the entire YZFS seemed familiar to literati readers. In these few passages, Li Jie was “on the same page” with those people he wanted to educate with constructional management.

Li Jie also made information in Yingzao fashi accessible by altering the sequence of the terms in the “Zongshi” section to match the sequence of building techniques associated with the terms in building practice. In most leishu, including Taiping yulan, terms about architecture are in three kinds: forms, elements, and functions. Those terms mentioned above are organized by their general forms. Other terms for example, chu 廚 (kitchens) and ce 廁 (restrooms) are about functions, and zhu 柱 (columns) and liang 梁 (beams) are architectural elements. Although Taiping yulan covers nearly double entries about architecture, 94 in total, of the chapters of “Zongshi” in Yingzao fashi, 48 in total, Li Jie sophisticatedly chose them in reasonable level of details in building constructions and reordered them by different kinds of crafts of constructions. For example, Li Jie only mentioned two kinds of doors: men 门 (doors within a structure) and wutou men 鳥頭門 (self-standing doors/gates) and talked about details in the sections about
construction instead of talking about random terms about door like men 門 (doors), hu 戶 (an alternative name of door), shu 枠 (an structural element to stabilize a door), etc.

Therefore, Li Jie offered a reliable guide as well as a new perspective for literati readers not only to administer construction but also a framework towards the artisans’ architectural knowledge that titled yingzao. At the same time, Yingzao fashi organized the literati knowledge about architecture features by their roles in constructions and mapped the dual knowledge-system explicitly for the first time.

Modern professional terms jianzhu or architecture would cause confusion about the societal nature of architecture in imperial China. The social structure changed radically with the modernization since the 19th century. Literati class disappeared and thus the traditional literati knowledge system therefore broke apart. Jianzhu has been theorized to inherit the knowledge of yingzao because it was about the profession. But gongshi lost its social groups and thus lost its significance in language and studies. By rethinking the connections between terms and social structures, we challenge the ideas of looking for comprehensive theoretical approaches of “architects” from the artisans in the Chinese history. Instead, we need to think about the interconnections between these two knowledge systems of architecture in order to how architecture was perceived differently by users and builders.

Scholarly construction of architecture:

The eve before the introduction of architecture

The ways of categorization about architecture have never been a consensus in historical documents, but in most cases, gongshi held its position to cover all architecture for centuries.
Even in mid-19th-century English-Chinese dictionaries, *architecture* still refers to building activities, and its products were *gong*.\(^{45}\) Scholars from the last few centuries of imperial China offered their last imaginations and studies of *gongshi* before the introduction of *architecture*.

*Gongshi* could be both the title for sections about architecture and the subsections about imperial palaces. For example, in the “Tupu lüe” (Section of Images) of *Tongzhi* (Comprehensive Record) from 1161, the author Zheng Qiao listed various kinds of buildings under the title *gongshi*.\(^{46}\) These buildings were not laid down by forms but by their purposes like *gongshi* 宮室 (imperial palaces), *zongmiao* 宗庙 (imperial ancestral halls), *mingtang* 明堂 (imperial temples), *piyong* 譁雍 (imperial schools), *julu* 居廬 (general housing), etc.

Sometimes, *gongshi* referred to imperial palaces only without an overarching *gongshi* needed. The resistance/hesitation of cataloging all kinds of architecture under *gongshi* as a whole was due to the imperial system in terms of *li* (rites of social orders). Because in the traditional knowledge system, *jing* 經 (Confucian Canon) is the most important knowledge which was kept and studied as a whole, and many written materials about early architecture were kept in these canons. For example, *zongmiao* was not included in the “Gongshi” section sometimes. In other words, *zongmiao* is an individual architecture typology even though it has very similar appearance and the same building techniques. Modern scholar Fang Xiaofeng 方曉風 noticed the difficulties in today’s classification of historical architecture by saying religious architecture is not a parallel concept of architecture associated with *li*.\(^{47}\) But I think this difficulty was not

\(^{45}\) In *English and Chinese Dictionary* published in 1847 and 1866, “architecture” was translated as “the methods of building *gong*” 造宮之法. This translation indicates the translator was aware of the differences between architecture and the Chinese term *gongshi*. See Xu Subin, *Jin dai zhongguo jianzhu xue de dansheng*, 26.


only the result of the incompatibility of the ideas of religion and ideas of li, but also because the idea of architecture is not compatible with traditional naming system of architecture. In some leishu, zongmiao was usually mentioned in sections of “Dili” 地理 (Geography) and “Liyi” 禮儀 (Rites) but not in the “Gongshi” section. The “Gongshi” section merely describes imperial palaces and other architecture in terms of form, like a two-story hall, pavilion, and waterside hall. The “Dili” section usually includes tombs and cities and the “Liyi” section usually includes imperial temples and imperial schools.

In the imperial cultural context, from the missionary’s perspective, “architecture” should be translated to “gongshi.” In the Qing dynasty, missionary Ferdinand Verbiest 南懷仁 (1623-1688) published his introduction of European knowledge titled Xifang yaoji 西方要紀 (Important Records of the West). Entry of architecture was called gongshi which records features of European architecture:

Gongshi
Building architecture in Europe is a little different from that in China. In Europe they mostly have walls made by stones and bricks. The thickness of the wall depends on its height. Walls are made by bricks, stones, sands, and lime; and they seldom are made by timber columns and boards, in order to live safely, for a long time and protected from fire.

宮室
西洋造室，與中國稍異。大都以磚石為牆，牆基量牆之高而深稱之。純用磚石沙灰，少用木柱板壁。圖其安住久居，而預防火患也。\(^{48}\)

In Ferdinand Verbiest’s writing, gongshi departs from its theory-focused meaning in Chinese context but introduces European architectural construction to the Ming literati. At certain level, Verbiest expanded the meaning of gongshi by translating “architecture” as gongshi, disregarding

gongshi’s contexts and traditions discussed above. Another Jesuit Alfonso Vagnoni 高一志 (1566-1640) describes Virgin Mary’s gongshi in Shengmu xingshi 聖母行實 (Virgin Mary’s Real Conduct) in 1631:

Virgin Mary’s gongshi
Where Virgin Mary’s real conduct had taken place has been recorded in earlier texts. Here is a brief list of the most remarkable ones. And gongshi [site of a miracle] is one of them. Since Virgin Mary ascended to Heaven, all holy followers believe that the sites of Virgin Mary’s miracles (gongshi) are still preserved in Nazareth, where the Annunciation happened.

Vagnoni’s writing connects gongshi to Nazareth’s sacred place in the Bible and its use is alike later Chinese scholars’ tracing gongshi of the noble people in the ancient times from classics studies. Around the same time, many Confucian scholars like Jiang Yong 江永 (1681-1762) Cheng Yaotian 程瑤田 (1725-1814) and Hong Yixuan 洪頤煊 (1765-1837) had interests in the architecture from the classics study because they thought the space of rites are basic knowledge they need to study.50 Hong Yixuan wrote the preface for his Lijing gongshi dawen 禮經宮室答問 (Answers to the Questions about Gongshi in the Book of Rites):

No research other than that on gongshi has more importance for the study of the Book of Rites (Liji). If the concepts embedded in the term gongshi are unclear, specifically how they turned, rose up, and went down. These are all unclear and we cannot know where it happened. This is the aspect that remains controversial among those who discuss the text. Li Rugui in the Song dynasty wrote Shi gong (An explanation of the concept of gong) to explain some essential concepts.

Recent evidential scholars have examined many different texts and offered explanations, but their work is still not comprehensive. I think there are not so many differences between the use of space in ancient gongshi and today’s gongshi. Early temples, houses, and mingtang were not the equal of today’s buildings. When I read the Book of Rites closely, I was able to discern the dimensions and determine the orientation. Therefore, I wrote *Answers to the Questions about Gongshi in the Book of Rites* in two chapters.

禮經莫大於宮室。宮室不明，則古人行禮之節，周旋升降，皆茫然莫知其處。此議禮所以如辯訟也。宋李如圭撰釋宮，已撮舉其凡。近人復多攷證，核以經文，亦有未密。余思古人宮室制度與今人不甚相違。時淳世樸廟廬明堂，不如後人之千門萬戶。細繹禮經皆有丈尺可尋名位可辨。因撰宮室答問二卷。51

This trend of scholarship (qianjia xuepai 乾嘉學派) urged to acquire authentic knowledge from the Confucian Canons by looking for the oldest texts (*jingxue 經學*). Scholars tried to investigate early architecture (mostly layouts in plan), and the majority of this kind of analysis lacked technical specificity for architectural studies. However, later in 1790, a scholar Jiao Xun 焦循 (1763-1820) wrote *Qunjing gongshi tu 羣經宮室圖 (Diagrams of Gongshi in Various Classic Literature)*.52 He also thought architecture was the foundation of classics study.53 Instead of being obsessed with old texts, Jiao Xun aimed to connect and reframe the knowledge of gongshi from these sources.54 It is a monograph (that has been overlooked) tried to systematically incorporate materiality (i.e., contemporary detailed architectural elements as well as construction methods to some extent with diagrams) into the traditional literary and evidential study of ancient noble architecture.

51 Hong Yixuan 洪頤煊, *Lijing gongshi dawen 禮經宮室答問*, 1a.
54 Chen Juyuan, *Jiao Xun ruxue sixiang yu yixue yanjiu*, 130.
Jiao Xun’s book is innovative because of its departure from traditional narrations about this concern of architecture. Other contemporary scholars usually discussed (1) different types of ceremonial architecture from the beginning like zongmiao 宗廟 (temples for ancestors), mingtang 明堂 (temples for gods), etc. and (2) rooms’ names in a hall. Instead, Jiao Xun reordered the information in the first volume from cheng 城 (city) to wu 屋 (house), which is from its architectural size sequentially. And in the second volume, he then discussed the various kinds of temples.

This book is innovative also because of its tridimensional diagrams. Prior to this book, diagrams of architecture in this kind of books (not many books have diagrams) usually focused on the general layouts of the houses and courtyards, where used to hold ceremonies. And these diagrams were very abstract. However, Jiao Xun added detailed diagrams labeling elements of architecture like eaves, columns and beams. In addition, he even offered diagrams about the methods of calculating the height of the ridge based on the total width of the base.

Even though Jiao Xun did not claim his own theories about architecture, his attempts to reorganize the knowledge of architecture from a literati’s perspective is already remarkable. From Jiao Xun’s perspective, early architecture was not only the spatial arrangement in plan, but also an integrated knowledge system includes “classical” city planning, palatial layouts as well as building techniques in dialogue with his contemporary architecture. Therefore, in this case, he was one of those rare people who looked at architecture as a study in and of itself. However, this attempt was still intended to serve the classics study or maybe his own interest. Because the dual system of knowledge in the nature of the imperial society discussed above, literati had no motivation to thoroughly study the entire field of architecture as a profession despite some curiosities.
Conclusion

_Gongshi_ means architecture but by no means is it associated with the more contemporary definition of the “art or science of building.” _Gongshi_, as a kind of architectural knowledge, was known as the distinct Chinese timber-frame building tradition and cultural identity that were constructed by the imperial societal contexts. The emergence of _gong_ marks the establishment of civilization and the elevation of character’s use in social hierarchy also marks the start of the period of imperial China. _Gongshi_ with its historical narrative, political structure, and social structure should not be separate. In order to state that the imperial power was inherited from the earliest years of the Chinese civilization, the highest-rank architecture was described to have direct connections to the earliest built architecture. Architecture as well as the terms related to it were blended in the imperial system as an exclusive social-class marker. Complicity between literati-officials and emperors made _gongshi_ a medium of political dialogue of virtue.

During modernization after the late 19th century, because of the radical social change, _gongshi_ lost its audience and users, which was the imperial ruling classes: the literati-officials and royal families. Therefore, the narrative and naming system of _gongshi_ was replaced by non-hierarchical terms like _fangwu_ 房屋 or _jianzhu_. Liang Sicheng used _gongshi_ for historical architecture for a short period of time in 1920s, but later _gongshi_ did not enter the main steam of study since _jianzhu_ has been the widely used term in the studies of architecture.

Terms construct minds. _Gongshi_ has its limit in connecting with the modern concepts and professions but reflects a unique way of thinking from China’s imperial period. Knowledge of architecture controlled by Confucian scholars and artisans completed the realm of architecture in
traditional China. Under the traditional hierarchical socio-political system, from the literati’s perspective, there was no need to frame a complete knowledge system for architecture. And artisans usually would not be able to participate in the discussion of the classical architecture with literati. Because of the social division, architectural literature created by literati was usually circulated among literati. Because of the political purposes in some work, literati’s writing about architecture is more valuable in terms of their perceptions of architecture than their references to certain architectural features. The use of *jianzhu* in modern studies tends to blend architectural knowledge used to be hierarchical in history. And this study reminds us that architecture is always a societally-determined subject (theoretically and practically) to a certain extent.
Quzheng 取正 (being straight/perpendicular)

Seeing and being in the world

The entry of quzheng is mentioned three times in Yingzao fashi (YZFS) in the following sections: “Kanxiang” 看詳 (Abstract), “Zongshi” 總釋 (General explications), and “Haozhai zhidu” 建築制度 (The standards of foundations and walls). The term itself means being straight and/or perpendicular. In the “Kanxiang” section, quzheng combines the definitions given for this term in the “Zongshi” and “Haozhai zhidu” sections. The author listed historical quotes about the idea of quzheng in the “Zongshi” section. Since building a foundation is the first and foremost step of a construction process, “Haozhai zhidu” is the first major chapter and quzheng is the foremost method/principle among several others in it. Because quzheng is also an idea that was distilled into “Kanxiang,” the author must have paid special attention to this concept.

Quzheng was not only a major step in building but also a metaphysical principle. The term quzheng has two characters: qu 取 and zheng 正. Qu means to take, to use, to go and to be. Zheng means straight, perpendicular, front, correct, orthodox, and ethical. In the “Haozhai zhidu” section, YZFS describes the basic methods of marking a proper rectangle on land by matching the right position with the sun (Figure 1). But in “Zongshi,” YZFS gives more archaic and poetic explanations. Quzheng means being in a right direction (north-south). In the beginning of “Kanxiang,” YZFS also quotes “Kaogongji” 考工記, compiled sometime between the 5th and 3rd century BCE, which says “holding a nie straight up and then watching the sunlight” 置槃以垂，視以景. From captions of illustrations in YZFS, the frontal view is called zhengyang 正様

1 Further explanation of kanxiang see Cheng Li 成麗 and Wang Qiheng 王其亨, “Yingzao fashi kanxiang de yi” 《營造法式》“看詳”的意義, Jianzhushi 建築師, no. 04 (2012): 66–69.
2 The major part of the “Kanxiang” section is the combination of information from “Zongshi” and “Zhidu” for selected entries.
(Figure 2). Therefore, zheng is not only about the right position or direction but also about the angle of seeing. And zheng is not only a horizontal idea but also a vertical idea.

This idea of being straight and/or perpendicular has a great impact on architectural images produced in imperial times. It is misleading and inaccurate to classify and judge Chinese visual history in terms of linear perspective and elevation. Imperial China has its own system of representational techniques.4 At that time, drawings, paintings and diagrams could all be called tu (Figure 3). In this sense, these images serve different purposes; they are not separated into concepts but fall into one single category. YZFS has six chapters of tuyang (exemplary images). YZFS is more about standards of construction than symbolic appearances, so that this zhengyang do not appear frequently in illustrations of timber-frame structure. But in other documents like gazetteers, zhengyang is the dominant view, the right view of architecture (Figure 4). Drawing techniques did not develop as much as architecture techniques throughout history. Until the 18th century, Chinese painters and drafters did not know how to calculate “space” in a 2D perspective. It is also possible that in imperial China these effective visual languages with the idea of quzheng sufficiently communicated.

I classify the idea of quzheng into two kinds of angles of view within Chinese architectural images: frontal view and tilted view. Even though we usually determine linear perspective by its vanishing points, perspective is also about a point of view, a way of seeing or understanding. The Chinese frontal view usually shows the front of a building only and usually appears in official records, though it does not specify vanishing points (a foreign concept to this kind of architecture in any case). The tilted view is usually used in technical drawings and ruled-line painting, which is mostly objective. Unlike the frontal view, this tilted view cares about zheng in terms of its

4 Wu Cong 吳蕙, Zai touying zhiwai: wenhua shiye xia de jianzhu tuxue yanjiu 在投影之外——文化視野下的建築圖學研究 (Tianjin: Tianjin daxue chubanshe, 2004), 238.
precise depiction of a parallel view. The frontal one is more about direction or how a viewer is meant to be oriented in relationship to sociocultural hierarchies, and the tilted one is more about precision or how the depicted objects relate to other objects and context. These two views are independent but also complementary to each other: A tilted view is a shifted frontal view and a frontal view is a shifted tilted view; the final result depends on the degree of shifting. Sometimes, these two views are not absolute or exclusive but they are mixed in one image. Which view to use depends on how the drafter would like viewers to perceive the subject (degree in-between precision and direction). They are two extreme ways of describing the drawings but they are just views shifting from one thing—architecture—and they both emphasize different aspects of zheng.

**Frontal view (symbolic view): straight up**

Because Chinese architecture, with its large roofs, does not have flat fronts like European architecture, contemporary scholar Zhao Chen claims that the ideas of façade and elevation do not exist in Chinese tradition. His evidence includes the lack of elevation views in YZFS illustrations and no mentions of elevation in the steps of timber-frame construction. Because elevation drawings in architectural drawing sets became a default for modern Chinese people’s understandings of architecture, Zhao cautions that measured drawings and this view (of façades and elevations) are a misreading of Chinese architecture. However, Zhao’s claim that “elevation” causes a misreading of Chinese architecture might also be a misreading of Chinese architecture itself.

YZFS does not tell the whole story about architecture in its time, and elevation/façade does not only refer to physical surfaces. YZFS was written for a very limited and elite audience to supervise construction (that is, how to build a building on budget). YZFS did not reproduce elevations to reflect the final appearance of buildings. Façade can also be the frontal facing — a component separates from structure that could be replaced. This kind of façade, from a structural consideration, does not exist in Chinese architecture because of the depth caused by its roofs. But if we consider façade as an idea of the frontal side of architecture (its face) regardless of structural differences, this frontal view is common in both European and Chinese architectural systems.

The attention to the front and its alignment has had a long history in a wide range of sources. The straight axis connecting the front of a building implied the truthful ethic in the imperial period. Sitting in the middle of the Main Hall (zhengdian 正殿) in the imperial palace, the Song-dynasty Emperor Taizu 太祖 ordered to open all imperial gates in front of him, and spoke to the officials, “this is like my heart; there is little untruthful complication; people see it” 此如我心，少有邪曲，人皆见之. Here, the straightness and orientation of the imperial palace became the metaphor of the morality. By directing viewers to see the image of the emperor at the center of the Main Hall in the palace, the emperor empowered the expected frontal (i.e., zheng) view of this architecture.

Frontal view is always the most important visual knowledge for Chinese architecture recorded in encyclopedias, huidian, and gazetteers. It is a symbol of architecture. This similar drawing technique was also used in maps to indicate the correct direction of view (Figure 5). When the main hall faces south (usually the lower side of the map), the side halls face east and west (right

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6 Zhao Chen, 122.
7 Songshi 宋史 (Beijing: Zhonghua shuju, 1985), juan 3, 49.
and left side of the map). Maps not only show the real directions of buildings but also lead viewers to go through the depicted complex in their minds. Usually, gates give their outward side on maps. Therefore, this feature also tells viewers about the inside and outside of a complex by the direction of the gates.

When viewers see architecture in person, architecture tells viewers the most important direction not only through the ritual/cultural regulations of people’s standing points but also through elements of architecture. Elements like patterns on roofs, *danbi shi* 丹陛石 (decorative carving stone in the middle of the steps), *dougong* 斗拱 (bracket sets), and naming tablets draw viewers’ attention to architecture’s front (Figure 6). In this and other senses, the front matters very much, because it lets you know where you are, who should enter, and how they should enter: it guides direction of interaction and approach (both social and physical).

Paintings also show temporal installations of décor on the front of buildings in ceremonies and festivals. For example, a building that’s usually blank and devoid of fashion, can suddenly be bedecked with foliage and bright colors to signify New Year’s Day, a marriage, or the emperor’s presence (Figure 7). These temporal décors are not placed ubiquitously all over the building but are rather another specified frontal layer on top of existing pre-constructed symbols used to create a more delicate architectural front. They are closer to the narrow definition of façade but still belong to the idea of frontal view.

The legacy of this frontal view also influenced the way European people depicted Chinese architecture in their own images. In monographs and publications in European languages from the 18th c. to early 20th c., depictions of Chinese architecture sometimes follow the Chinese tradition of a frontal view (Figure 8). It’s possible that European authors hired Chinese drafters
or European drafters copied some Chinese drawings. Some later drawings of frontal views are hard to discern from the European style of elevation in these European publications. The full adoption of European drawing methods in the 20th century eclipsed the traditional frontal view. The westernization of the Eastern frontal view complicates and muddies an understanding of this view, because it is a part of a standard western drawing set of architectural presentation. Today, this symbolic frontal view nevertheless appears on maps, on road signs, and on emojis, which points to its cultural resilience and persistence.

**Tilted view (objective view): isometric**

Traditional paintings share a similar drawing method to construction-reference drawings in YZFS, and it is called *jiehua* 界畫 (ruled-line painting). In general, this view in *jiehua* usually depicts buildings, but in YZFS, this view depicts disassembled parts of buildings (Figure 9). This drawing method was similar to the contemporary isometric view or parallel view. With a little tilt from the frontal view, this view contains some information about one side and the top.\(^8\) Therefore, this view allows viewers to navigate by themselves (that is, it is less prescriptive than the frontal view). It translates an object on a 2D surface with the most information it could possibly offer. It is less selective in the sense that it cannot show the entirety of the building. This correction of the information on the drawing is like the correction of measuring the land by *quzheng*. This tilted view cares about objective precision in straight lines. It does not want the viewer to focus on and be impressed by the symbolic front of the building. It is more impartial but also gives more room for viewers’ interpretation and recreation.

\(^8\) In YZFS, views that show the front and one side are sometimes called *zhengyang* (frontal views) too.
“Painters are supposed to master some constructional knowledge,” a master of painting said in the 12th century. At that time, this phrase meant painters, drafters and carpenters shared a drawing language about precision (Figure 10). As extant evidence, YZFS records this kind of communication. From the earlier paintings (the 11th-12th century) to the later images like that in a printed and well-circulated encyclopedia Sancai tuhui (Illustrations of the Three Powers, published in the 16th century), this way of painting continued in history. Therefore, this view was not only a way of recording but also a way of learning and knowing. More people were able to access these kinds of images and this knowledge of drawing spread to more widely by the advanced printing techniques in the Ming and Qing dynasties.

In paintings commissioned by the Qing court, authenticity in depiction is one of its representational goals. The emperors wanted to record ceremonies for military victories and festivals, and to record the places built for royal families (Figure 11). Some art critics thought these paintings drop the artistic value (lack imagination and are too pragmatic) when compared to traditional literati paintings. However, these paintings do their job: telling the correct information. Nevertheless, the parallel view is widely used for depicting these scenes and architecture by the Qing court painters.

Before linear perspective was introduced, these two angled views were the most common visual angles for architecture. However, they are independent but not exclusive. One drawing can have two angles of views for different parts of the it at the same time (Figure 12, 13).

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11 Nian Xiyao 年希堯, Shixue 視學 (Shanghai: Shanghai gu ji chu ban she, 1995). Its first edition was published in 1735.
Consistency in one image does not mean consistency of drawing techniques but means consistency of meaning behind the image. Even though these views set up rules of viewing (like frontal and tilted), both kinds of views are experiential. A frontal view emphasizes the symbolic moment, and a tilted view gives viewers a temporal poetic experience in paintings, a continuous experience in handscroll paintings/series paintings and a period of time (process) to understand the architectural elements in illustrations like that of YZFS. That is, they allow drafters to direct viewers, allow drafters and viewers to communicate in a shared correctness and precision of zheng, and further allow viewers to acknowledge an imperial ethical zheng.
Yan 檐 (eave):
An Interface between Interior and Exterior

Yan appears three times in Yingzao fashi in the following sections: “Kanxiang” 細詳 (Abstract), “Zongshi” 總釋 (General explications),¹ and “Damuzuo zhidu” 大木作制度二 (Major timber-frame structure standard: part two). Technically, yan is the peripheral part of the “roof” structure; it refers to the eave made by the assembly of rafters and other wooden parts. In “Kanxiang,” there is a section with alternative names for major terms, and yan is one of these. Among them all, yan has the greatest number of alternative names (fourteen). In “Zongshi,” YZFS lays historical references in literature about yan. In “Damuzuo zhidu,” the dimension, structure and form of yan are regulated. With so many alternative names, yan already signals its complexity.

Technically, yan is part of a “roof.” But in YZFS, there is no direct mention or entry for roof and so YZFS does not say yan is a part of it. Perhaps the idea of roof was so well-known that it was not worth noting. This lack may also indicate the absence of the concept of roof at that time, or that at least it was not a major concern for construction. It may be that what results in building a roof was not a single construction step but a combination of two steps: timber-frame structure and tile work. These two steps belong to different artisan groups, and they are separately described in YZFS. However, YZFS does introduce some concepts that are not construction steps but are major concepts that are related to architecture like gōng 宫 (architecture, palace, space), ting 亭 (pavilion), que 闕 (the gate of palaces) and qiang 墙 (wall). The roof did not fall into the category of architectural typology and was not considered as an independent element. There is also no mention of roofs either in the timber-frame section or the tile section. Ci yuan 辞源, the dictionary on the origins of Chinese terms, lists an old term for roof called wūwū 屋廂 from a

¹ In this section, Li Jie 李誡, the author of YZFS lists archaic references of architectural terms (constructional and typological).
3rd-century work of literature, but wūwú is not a precise translation of roof; it is more like an alternative name for buildings. Maybe a building is a “roof” and a roof is the reason for the building. It might be too arbitrary to say the concept of roof did not exist in traditional Chinese based on limited sources. Nevertheless, the idea of roof was not a term that YZFS recognized and regulated. It is uncertain if roof was an independent concept at that time but yan was an independent concept.

Yan is a covering from above. Conceptually, yan should not be a part of a “roof.” Instead, a “roof” could be an extension or a completion of yan in material. The entry of yan in the “Zongshi” section starts the first sentence saying “dong 棟 (timber under rafters) is above and yu 宇 is below, (they are made) to defeat wind and rain” 上棟下宇, 以待風雨. Here yu is also recorded as the first of fourteen alternative names of yan in the “Kanxiang” section. This phrase is exactly the first line of the entry of gōng (architecture, palace, space) in YZFS, and it is also in the very first sentence of the book itself in the preface (Figure 1). Dong represents the upper “roof” structure, and yu is lower “roof” structure. Literati used two structural elements: dong and yu together to represent architecture as a whole: a protective structure.

Yan is the boundary of interior and exterior. Literally, interior fixed-furnishing is called neiyan 内檐 (inner yan) furnishing, exterior fixed-furnishing is called waiyan 外檐 (outside yan) furnishing.

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2 He Jiuying 何九盈, Wang Ning 王宁, and Dong Kun 董琨, eds., Ci yuan 辞源 (Beijing: Shangwu yinshuguan, 2015), 1226.
Yan also set up a special spatial condition between interior and exterior. The columns (柱 zhu) underneath yan are called yanzhu 檐柱. Liang Sicheng translates them as “peripheral columns.” It is a correct translation in terms of the position of yan in structures, but it eliminates the presence of yan in terms of space. If we put yan back into the translation of peripheral columns, these two structural elements (column and eave) together become a structural frame that encompasses an idea of space underneath the eave (Figure 2). Wú 廟, the eleventh of fourteen alternative names of yan, has an explanation in Yixun 義訓 (Annotation of Ancient Words) mentioned in YZFS. Wú is the space under yan. When putting the column in, then the space could be called a (one-bay-deep) lang 廳. Wú and lang are interchangeable in the later dynasties and both refer to a structure around a hall that is only covered on its top. Therefore, yan offers an intersection or a transition between interior and exterior.

Yan almost becomes a symbol of architecture. Firstly, it signals the rank of architecture. YZFS cites Li 禮: “Double-eave is the décor of an emperor’s temple” 重檐天子廟飾也. In general, high ranked architecture (that can be temples and palaces) have double eaves. It is not only a décor adding layers onto the external visual appearance, but also a symbol of social hierarchy. Secondly, yan is the representative of architecture in story-telling images. It is a moment of encounter and interaction. It is evident in many visual materials in both paintings and illustrations. Chinese interiors were usually interpreted through the lens of a frame: the combination of yan and zhu. This kind of opening mediates publicity and privacy, and communicates interior and exterior (Figure 3). The angle of view is usually the tilted view. As a result, only a limited slice of an interior can be shown because of the covering of yan. Moreover, in many cases, images do not show the entire “roof.” They show the yan but do not go beyond by

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5 Li Jie, Yingzao fashi, juan 2, 3b.
only showing the columns. This combination is like a “stage” (Figure 4). Yan here tells viewers the set is a covered situation. Even after the linear perspective was introduced to China in the 18th century, Emperor Qianlong still did not give up the idea of being painted under a yan and the “roof” just exists in an extended imagination beyond the framed image (Figure 5).

Yan has a special significance in the visual history and mindset of premodern architecture. Premodern architecture might have another breaking-down system of parts of architecture. The idea of roof might be a modern “self-evident” misreading on this kind of architecture. A “roof” is not separated from architecture. That means, among the trees and mountains in landscape paintings, these are not “roofs,” they are architecture. From a larger scope, yu (one alternative name of yan) means the metaphysical idea of space, that is space extends in six directions. Yu had been used with the metaphysical idea of time: zhou 宇; together the term yuzhou 宇宙 means the universe. Moreover, yu had been added to other characters to represent architecture in literature since the 2nd century or earlier.6


**Jing 景 (scenes):**

From A Natural Element to Built Environment

Jing 景 was initially a character meant to refer to sunlight, but in later paintings and writings, it also refers to selected scenes: natural and built environments.  

Jing does not have its own entry in YZFS but it is mentioned three times in “Zongshi” 總釋 (General explanations). The first time is in the entry for quzheng 取正 (being straight and/or perpendicular). The second time is in the entry for cai 材 (materiality). The third reference occurs in the entry for pingzuo 平坐 (balcony, platform).

In quzheng, Jing means sunlight. The quzheng section talks about the method for making straight lines in the proper direction on the ground by referring to sunlight (Figure 1). Builders watch the shortest shadow casted from sunlight to determine the direction. This meaning of Jing also appears in a quotation from a 2nd-century work of literature “Lu lingguangdian fu” 魯靈光殿賦 (Rhapsody on the Hall of Numinous Brilliance in Lu), which says “people sit in the middle (of a balcony) and get Jing from above” 中坐垂景.

In the entry for cai 材 (materiality), Jing is mentioned in a quote from Lüshi Chunqiu 呂氏春秋 (Master Lü’s Spring and Autumn Annals), which says “when a building master Jing the size (of timber) and then knows the materials (to use)” 夫大匠之為宮室也, 景大小而知材木矣. It might be a transcription error because the text from other sources indicates the character here is not Jing 景 but liang 量 (measure). But if the copier of this edition of YZFS thought Jing could fit

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1 Li Xueqin 李學勤, ed., Zi Yuan 字源 (Tianjin: Tianjin guji chubanshe, 2012), 602.
2 Li Jie 李誡, Yingzao fashi 營造法式, juan 1, 7b. Tao Xiang 陶湘 edition.
here, it urges us to think of its other meaning: look upon.\textsuperscript{3} This meaning of \textit{jing} implies the direction toward sun and also expresses human interaction with nature.

As sunlight, \textit{jing} already implies its meaning of human perception. Sunlight is an abstract idea and only shows its form by shadow.\textsuperscript{4} In a painting catalog \textit{Xuanhe huapu} 宣和畫譜 (The \textit{Xuanhe Catalogue of Paintings}) made in the Song dynasty Emperor Huizong’s 收宗 reign in 1120, \textit{jing} had already expanded its meaning to enjoyable natural moments (seasons) and places. \textit{Jing} is a temporal condition inherited from its origin meaning: sunlight. It is scenery casted/illuminated by sunlight. At that time, \textit{jing} was mostly used to name specific scenes just like specific mountains and buildings are named. The term \textit{jing} usually only appears in some titles of paintings like “The Residences during the \textit{Jing} of Snow in Mountains” 雪景山居.\textsuperscript{5} Sometimes \textit{jing} is a specific location associated with certain mountains and streams; and sometimes it is used to name a specific moment like sunset and a misty condition. \textit{Jing} also appears in painting titles to describe some general scenes, that are called \textit{xiaojing} 小景 (little scenes). Painting theorist Guo Xi 郭熙 (ca. 1000-1087) said landscape paintings have four qualities: (1) viewers should be able to “walk in,” (2) to view the scenes, (3) to live in them, and (4) to travel through them. There is architecture in many of these landscape paintings. It appears in the background, middle ground and foreground. Architecture in the background usually hides in mists, trees and mountains, rendering it partially legible. Architecture in the middle ground usually mediates human activities in nature. And architecture in the foreground offers a place for the viewer to look into the distance toward \textit{jing}. And, the passage ways in the paintings are not limited to the paths in the mountains and along the shores but include passages connecting villas, farmers’ houses and farmlands. At this time, \textit{jing} is still a term that mostly refers to natural scenes and

\textsuperscript{3} Wang Li 王力, \textit{Wang Li guhanyu zidian} 王力古漢語字典 (Beijing: Zhonghua shuju, 2000), 437.
\textsuperscript{4} In traditional Chinese, \textit{jing} means both shadow and sunlight.
\textsuperscript{5} \textit{Xuanhe huapu} 宣和畫譜, juan 10. \textit{Siku quanshu} 四庫全書 edition.
either architecture is fully legible or not in paintings. Nevertheless, architecture is always rendered among natural elements: trees, mountains and clouds.

Derived from *xiaojing* (little scenes), *jing* became an overarching concept about a visual experience. People started to group these enjoyable scenes in this one phrase: *jing*. An album or scroll that contains eight paintings (natural and built scenes) is called a collection of eight *jing*. Literati named some sceneries by poetic names like “Evening Bell from a Mist-shrouded Temple,” “Geese Alighting on a Sandy Shore,” “Mountain Village in Clearing Mist” (Figure 2). Even though architecture already harmoniously existed with natural landscape in previous paintings, *jing* became a term to conceptually describe all enjoyably engaged natural and built environments. But this *jing* was still temporal, and it required certain natural conditions or human activities (Figure 3). Some albums depicted temples and natural wonders in continuous images. Used to describe natural elements, *jing* altered its meaning to embrace the man-made environment in nature. After the Song dynasty, it was hard to distinguish what is *jing* and what makes a *jing* (Figure 4). The meaning of *jing* is dynamic in context.

Perhaps Emperor Qianlong answered the above questions in the making of his imperial garden: Yuan Ming Yuan 圓明園 (The Old Summer Palace). In the 18th century, he asked court painters to paint every *jing* in this garden complex. Each *jing* means one building cluster in the large garden. The final product was a forty-page album with paintings and poetry side by side (Figure 5). Each page depicts one *jing* which has an archaic and poetic name like “harmony and peace on all land” given by the emperor himself. Architecture depicted here inherited the ruled-line

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painting technique from earlier centuries, which was very precise in terms of dimension and scale. But apparently, there was a difference between naming in the 18th century and that in the 11th century. Jing referred to the name of a building complex but not the conditions of the landscape only (either natural or artificial). Therefore, it further implied architecture was not only a place added on or separated from jing. Either it was architecture expanding its territory more towards nature or nature becoming a part of the built environment. Jing became the marking of an interaction, a moment of enacting the potentials of architecture in relation to users or surroundings. Jing thus became a focal point and the interest of both natural and built environments.

A painting treatise titled *Jieziyuan huapu* 芥子園畫譜 (*Manual of the Mustard Seed Garden*) from the 18th century notes that architecture in a painting is like the facial elements (e.g., nose, mouth, eyes) of a human. Even though it talks about adding architecture to a landscape painting, it points out the necessity of architecture in a painting. Jing is not only a place to look at but also a place people can navigate through and experience. Perhaps the increase of population in the 1000 years continuously changes the environment and jing (selective remarkable environment). The meaning of jing shifts throughout history from a natural element (sunlight) to an overarching concept that means harmonious enjoyable places, including natural environments and built environments. Architecture stabilizes and captures the temporal jing in the later dynasties. It converted and distills atmosphere, mood and experience into legible built environment by design and imagination.

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**Ding Gong** 定功 (measuring work)

Labor as Media

One benefit of *Yingzao fashi* 營造法式 (YZFS) was that it made construction economical.¹ Even in the Ming dynasty (around 500 years after the original publication), an official Zhao Qimei 趙琦美 was proud of the cost-effective construction when building government halls by using *Yingzao fashi*.² It means, if without the book, the owner might not be able to effectively manage the builders as well as budget. Because of the lack of records, it is not clear how YZFS was used by officials in the Song dynasty.³

Current research on YZFS is mainly focused on *zhidu* 制度 (regulation), which has been the way of investigating the appearance of architectural components and the building system of the Song dynasty.⁴ This term *zhidu* is tied with the imperial top-down hierarchical system.⁵ However, *zhidu* was not the major purpose of YZFS but rather the economical side: titled “Gongxian” 功限 (work and limit) in YZFS. Based on the inconsistency between texts of the “Zhidu” section and images in the “Zhidu tuyang” section, this chapter investigates the roles of the “Gongxian” section in the YZFS which reflected the interactions between the officials and artisans.

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¹ *Yingzao fashi* 營造法式 [Regulations in Buildings] was published by the Song government in 1103 in order to guide and manage all imperial construction projects like palaces, administration buildings and temples.

² Qian qianyi 錢謙益 recorded, “Qimei was an official of the Department of Supervision in Nanjing. He directed the construction of government halls with little cost and great success. He said he used *Yingzao fashi* from the Song dynasty” (琦美)官南京都察院照磨, 修治公廨, 費約而功倍, 君曰: 吾取宋人將作營造式也. See Qian qianyi 錢謙益, “xingbu langzhong zhaqiu mu biao” 詐部郎中趙君墓表, in *Chu xue ji* 初學集, *Sibu congkan* 四部叢刊 edition. See also Fu Xinian 傅熹年, *Zhongguo gudai jianzhu gongcheng guanli he jianzhu dengji zhidu yanjiu* 中國古代建築工程管理和建築等級制度研究 (Beijing: Zhongguo jianzhu gongye chubenshe, 2012), 245.

³ Fu Xinian, *Zhongguo gudai jianzhu gongcheng guanli he jianzhu dengji zhidu yanjiu*, 245.


⁵ The regulation is like certain group of people has the right to build certain kinds of buildings.
Ding gong 定功 means measuring work, which is a major concept of YZFS. Ding 定 means to confirm and to determine. Gong 功 means work. In YZFS, gong 功 refers to a measure (unit) for the labor of artisans, and the methods of ding gong is in the “Gongxian” section. In the preface of YZFS, author Li Jie 李誡 (Vice Director of the Directorate of Construction in the Song dynasty) states that the earlier edition of YZFS (now lost) was not good enough because of its lack of precise measurements in material and labor, and his new edition of YZFS has corrected this, resulting in a better governing of materials and labor. The effort put in by making detailed regulations the chapters of “Gongxian” implies the necessities and difficulties of government officials measuring and controlling the artisans’ work.

Ding gong is a top-down administrative tool set in the YZFS, which allows us to speculate about the interactions between officials and artisans as well as their respective specialties. YZFS, as a book of codified information (the extant archive we can study) like other literati’s books about artisans’ work, simplified the process of architectural construction in order to provide references for literati readers. “Regulations in Buildings” is both a rough overview and translation. This book empowered officials to supervise a contract and oversee the progress of a project. The details in the book enabled officials to avoid corruption and cheating but not sufficiently detailed to direct a construction or prepare a blueprint. The compilation of the book provides the language of building discourse and implies the processes of negotiation between artisans and imperial powers.

This overarching purpose underscores the importance of controlling the cost of artisans’ work from the officials’ perspective. In previous analyses of YZFS, many scholars have mentioned the economic utility of this book in its descriptions of how to estimate cost and measure payable

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6 Today’s meaning of work in physics (also translated as gong) is like the meaning of gong in YZFS.
labor units, as well as its role in the standardization of architecture in the Song dynasty. However, scholars have tended to prioritize the work as a sign/indicator of architectural standardization. In contrast, I argue a part of that standardization recognized by other scholars was, in fact, a byproduct of the daily imperial needs for the standardization of labor. The officials’ acceptance of artisans’ work and acknowledging artisans according to such standards were the foundation for a subsequent standardization of architecture. While YZFS records only certain forms (architectural styles/features), it is decidedly not a design guide for standardization; rather, the forms/styles recorded reflected an understood imperial labor calculation system that was legible both to artisans and government officials. To wit, those styles/forms featured in the book are likely those most dominant, commonly used and thus necessitating and allowing for consistent calculation.

In order to study the limits of control by government officials and the possibilities of artisanal influence of architectural designs and construction, this paper first identifies the YZFS as a manual that reveals the limits of official’s knowledge. The edictal book is extensive—it lists what they needed to know in order to manage artisans’ work—but it provides neither blueprints for the work nor plans and elevations for the design. It does not teach officials the sequence of work and methods of choosing structures. Furthermore it is not a carpenter’s manual that provides detailed instructions for construction techniques. Then, as a means to demonstrate the capacity of artisans to influence and inform imperial construction projects/architectural design, I present a case study of a moon-shaped beam developed by Jiangnan artists whose architectural style is found in the YFZS and in imperial palaces. This influence indicates their autonomy and ability to negotiate with imperial power in the Song and Ming dynasty.

9 Fu Xinian, Zhongguo gudai jianzhu gongcheng guanli he jianzhu zhidi zhidu yanjiu, 285-286.
Previous Scholarship

The purpose of publishing *Yingzao fashi* and the book’s relationship with artisans has been a topic of research for many decades. Many scholars acknowledge the dual system of literati and artisans in historical Chinese societies, but their interactions have not been thoroughly studied nor related to the use of the *YZFS*. *YZFS* has been widely considered to be a compilation of building standards or building codes. Fu Xinian has surveyed historical records and examined the construction administration throughout history, and found one characteristic of *YZFS* is determining the grades of techniques, materials and decorations. Scholars like Pan Guxi also suggest *YZFS* is a book for budget control to avoid corruption based on historical records. Qiao Xunxiang summarized different methods for the calculation of labor in *Yingzao fashi*. However, in neglecting to analyze the inconsistencies between the illustrations and the text and depicting the *YZFS* simply as a book that established the standardization of architectural style, scholars have overlooked the ways in which the book might have been actively used and read by the officials on a daily basis. Current analysis of the illustrations in *YZFS* mainly focus on the technical advancement in drawings (the isometric view) but neglect to evaluate the rationale behind the arrangement and selection of these drawings for use in practice.

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14 Qiao Xunxiang, *Songdai guanshi jianzhu yingzao jiqi jishu*, 162.
15 Chen Wei 陳薇, “Yingzao fashi tuyang yanjiu” 《營造法式》圖樣研究, in *Chenwei jianzhishilun xuanji* 陳薇建築史論選集 (Shenyang: Liaoning meishu chubanshe, 2014), 61–70. See also Wu Cong 吳蕙, *Zai touying zhiwai*:
contrast, my study builds upon Pan Guxi and Fu Xinian’s interest in budget control and relies on rigorous visual analysis to reveal the book’s priority is gongxian.

**Texts and Illustrations in Yingzao fashi**

The knowledge and practice of building is complicated. *Yingzao fashi* was a communication tool between different levels of officials as well as between literati-officials and artisans. The book was designed to facilitate communication regarding budget (from officials’ perspectives) and labor (from the artisans’ perspectives). Therefore, *YZFS* was not only about controlling the cost of construction but also reducing the confusion in communication about results of construction as well as the associated cost. *YZFS* was educational in that it offered officials some basic terms and methods that artisans were using. It was a regulation that fixed prices in order to prevent corruption and at the same time it was a tool for officials to understand the general parameters of architecture. Rather than a design guide or builders’ manual, it was a guide for officials to know about building in order to communicate with the artisans, pay the artisans, and avoid corruption. This publication was the documentation of officials’ knowledge about artisanal knowledge.

The measure of the cost in construction had always been a concern of the central government. For example, a high-level official Fan Chunren 范釗仁 criticized the rush of the hydraulic project in the 1090s. He remarked, “in all kinds of government construction, even a small one, calculating the cost of material and labor in advance is needed. Then, [the government] can judge the feasibility and decide if a project should be started” 凡欲舉事，雖小亦必預計材料，先備人工，然後杜力可為，方議下手.16 The minister of the Ministry of Revenue and Population at

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16 Li Tao 李燾, *Xu zizhitongjian changbian* 續資治通鑒長編 (Beijing: Zhonghua shuju, 2004), juan 415, 10090.
that time Su Zhe 苏辙 was frustrated by the division of responsibility in the central government where the Directorate of Construction was led by both the Ministry of Revenue and Population and the Ministry of Work. The unclear cost of certain work may cause him spending too much or unnecessary money on construction.¹⁷

It seems that Li Jie devoted considerable effort in clarifying and regulating a variety of situations and crafts to respond to the issue of cost.¹⁸ This cost also had to be accepted by the artisans. Ge Xin 葛昕, an official who supervised construction in the Ming dynasty, mentioned, “The system of administration would be sustainable if there were benefits for the artisans to make a living” 俾各匠趨利赴工方為有濟.¹⁹ The sections for measuring the amount of labor regarding certain type of work in the book are titled “Gongxian” 功限, which means work and its limit (control). These sections record the fixed price (in the measure of labor: gong) for certain crafts, which become references for officials when determining the budget of construction.²⁰ Certain work or tasks have a specified labor-calculation standard. For example, every 60 jin 斤 (about 80 pounds) is considered as 1 dan 擬 (bag), and moving 1 dan back and forth in 30 li 里 (about 6 miles) is considered as 1 gong (work).²¹ Besides the general labor mentioned above, many works are calculated by the number of objects done. For example, making one linggong 令掛 (bracket arm) is considered as 0.25 gong.²² From the sections of “Gongxian,” officials were able to measure the amount of work performed by the artisans and assign a consistent value to that work.

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¹⁷ Su Zhe 蘇轍, “Qing hubu fu sansi zhuan zhazi” 請戶部復三司諸案劄子, in Suzhe ji 蘇轍集 (Beijing: Zhonghua shuju, 1990), juan 41, 730-732.
¹⁸ YZFS implies negotiations between the author Li Jie and artisans. I use Li Jie as a representative of the Department of Construction in the central government and the imperial power. Fu Xinian, Zhongguo gudai jianzhu gongcheng guanli he jianzhu dengji zhidu yanjiu, 260.
²⁰ Fu Xinian, Zhongguo gudai jianzhu gongcheng guanli he jianzhu dengji zhidu yanjiu, 260.
²¹ Li Jie, Yingzao fashi, juan 16, 2a.
²² Li Jie, Yingzao fashi, juan 17, 1a.
During the contemporary period, other publications followed a similar stated purpose as Li Jie’s in the introduction to *YZFS*: they stressed budget management and construction administration. Edict books like *Hefang tongyi* 河防通議 (*Comprehensive Discussions of River Conservancy*) share this writing style of regulating *gong*. However, in addition to the detailed labor descriptions and measurements of *gong*, Li Jie also included illustrations—not necessarily detailed enough for construction purposes, but fully recognizable as different components or patterns. In other words, he illustrated some of the final products of *gong*, thereby permitting calculation of the cost on labor. Li Jie wrote, “For those building elements that require drawings for people to understand their shapes, I provided diagrams to clarify” 或有須於畫圖可見規矩者，皆別立圖樣以明制度. The illustrations in the book helped officials to distinguish between different products of artisanal labor. One reason why the Song government wanted to emphasize *zhidu* was because the officials wanted to get a sense of what they were building and its costs.

There were design drawings, constructional drawings, and acceptance drawings in the Song dynasty. I suggest that the purpose of these illustrations in *YZFS* was for officials to discern and inspect finished work from artisans. The acceptance of work and paying artisans with such standards was the first step in the standardization of architecture. It was not about standardization of architecture, though, but rather, ease of administration of construction projects.

The illustrations about most crafts, like non-structural timber-work, tile work, and masonry, are mainly the profile image of certain finished objects (Figure 1). These profile images simply indicate that they are not steps of building but a chart of objects for officials’ convenience of distinction.

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23 Li Jie, “Kanxiang,” in YZFS, 12a.
24 Qiao Xunxiang, *Songdai guanshi jianzhu yingzao jiqi jishu*, 68.
While most images of architectural components refer to corresponding entries in both “Zhidu” (determining their shapes and sizes) and “Gongxian” sections, some arrangements of images reflect to the narrative of the “Gongxian” section. For example, the arrangement of images of the doors with carved patterns (geshan men 隔扇门) refers to the different level of prices but not the exact ranking in the “Zhidu” section. Two styles of the framing of doors (top rail, bottom rail, lock rail, and lock stiles) were listed at the first in the “Zhidu” section (arguably ranked at the top) respectively followed by their downgraded version. The two standard styles are si hun shong xin chu shuang xian 四混中心出雙線 (S1) and po ban shuang hun ping di chu shuang xian 破瓣雙混平地出雙線 (P1), which both have two carved lines in the middle. Their downgraded versions S2 and P2 have only one carved line in the middle. The two standard styles in zhidu were worth the same for 40 gong in the “Gongxian” section and their downgraded versions also worth the same for 39 gong (Figure 2). The compiler of YZFS did not arrange these four images under the two separate styles (one full version and one downgraded version in two groups: S and P), but arranged them by their prices (two standard versions: S1 & P1 on one page and two downgraded versions: S2 & P2 on one page). This arrangement might indicate there were no difference in terms of rank between these two styles but it points out that style was not the only consideration in choosing illustrations. This arrangement made the use of the book (determining the budget) more convenient to officials.

The most complicated sections of drawings in the book are about structural timber-work, because its final product involved more components and/or steps than other crafts. These illustrations are categorized in 15 collections in 2 chapters: the first chapter has 9 collections and the second chapter has 6 collections. The first chapter is about specific elements and their assembly and the second chapter is about various kinds of timber-frame structure. The illustrations of structural timber-work have more pages and seem to cover the different steps of building, but they do not
provide images of specific construction techniques. Following the same logic as other crafts, drawings for structural timber-work, even though titled “Zhidu tuyang” (Illustrations of the standards), are not only images to clarify shapes of components described in the “Zhidu” section, but are, more importantly, images to clarify payable techniques that are listed in the “Gongxian” section.

The order of the illustrations of structural timber-work generally moves from parts to whole, which mostly follows the sequence in the “Gongxian” section but not the “Zhidu” section. Even though there are a few exceptions like juzhe 舉折 (formulars for determining roof curvatures) and tuanfeng panjian 梁縫攀間 (bracket sets in-between beams), which are not mentioned in the “Gongxian” section but in the “Zhidu” section, they do not affect the basic order and disprove the connection between illustrations and the “Gongxian” section because they are about very specific techniques that do not affect other crafts to any extent. Here I primarily focus on the first chapter\(^{25}\) because it is about architectural elements that have specs in the “Gongxian” section and the “Zhidu” section.

The first seven pages of illustrations are about different kinds of gong 枞 (bracket-arm), dou 斗 (block) 斗 and shuatou 萬頭 as well as their assembly: the bracket sets. The first collection of illustrations is titled “Dougong deng juansha” 斗拱等卷殺 (The curvature shape on bracket sets and other objects). It serves to regulate the shapes of objects but more importantly, it also serves the “Gongxian” section. The texts in the “Zhidu” section that mentions the bracket sets talks about gong 枞 (bracket-arms), fei’ang 飛昂, juetou 爵頭, and dou 斗 (blocks) in sequence (Figure 3). For each kind of gong, the “Zhidu” section talks about the form of juansha 卷殺 (the curvature shape); and for each kind of other element, the “Zhidu” section talks about their shapes.

\(^{25}\) The second chapter is about different timber-frame structures that neither the “Zhidu” section nor the “Gongxian” section describes. Therefore, it can be read as an independent chapter that records structural choices.
and positions in a bracket set. However, their sequence and emphases do not match perfectly with the illustrations. For example, in the “Zhidu” section, ang follows gong (bracket arms), but in the illustrations, gong (bracket arms) follows dou (blocks). The “Zhidu” section talks about various properties of ang but the illustration section only depicts the head of ang. This sequence and emphases match the “Gongxian” section. In the “Gongxian” section, the objects are laid out as gong, dou, angjian (the head of ang), and juetou. Here the emphasis on the head of ang makes sense because it is an individual measure of gong 功. These illustrations provide a check list for work and remind officials about the list in the “Gongxian” section.

The second collection of illustrations is titled “Liang zhu deng juansha” (the curvature shape of columns, beams and other objects). As with the first group, even though regulations on making the curvature shape is one emphasis in the “Zhidu” section, the “Zhidu” section does not explicitly lay out chuomu (supporting structures between beams and columns) and tuofeng ("camel’s hump": a wooden block in-between two beams) as they are depicted in illustrations (Figure 4). Instead, this layout is the emphasis of the “Gongxian” section, more specifically in the section “Diantang liangzhu deng Shijian gongxian” (Gongxian of beams, columns and other objects). Each of the various kinds of tuofeng are valued at 0.5 gong. The shape is not the only thing that is meaningful but rather the link between the shape and labor.

The third collection of illustrations serves both zhidu and gongxian, but it is more useful when reading in conjunction with gongxian in terms of measuring artisans’ work. This group is titled “Xia’ang shang’ang chutiao fenshu” (The amount of cantilever in bracket sets with shang’ang and xia’ang). Usually, illustrations for fei’ang 飛昂 in the “Zhidu” section are believed to explain different positions of ang in various kinds of bracket sets (Figure 5).
Indeed, it would be difficult to understand the construction of these sets by reading the text. But by laying out these profile images, it also serves to calculate or check gong. In the “Gongxian” section, Li Jie listed the number of objects that were supposed to be used in each kind of bujian puzuo 補間鋪作 (bracket sets between columns) right after the gongxian of individual elements like gong 棋 and dou 斗. These bracket sets (bujian puzuo) are exactly what is depicted in the illustrations. The work is calculated by accumulating gong of each individual element and their subsequent assembly. By checking the finished work against the drawings, the officials would be able to know if they should record the appropriate amount of labor.

Through illustrations no.5 to no.7, YZFS introduces joints (jiaoge 絞割) on different kinds of elements like gong, ang, dou and zhu in a three-dimensional way. Making joints is no less important than making the general form. And making joints is considered a separate work in terms of calculation of labor, so it has many drawings to clarify.26 YZFS does mention some joints in the “Zhidu” section like assembled columns (pinzhu 拼柱) and some (not all) variants of certain gong 棋 (bracket arms), which are depicted in the illustrations, but does not mention their use explicitly (Figure 6). Therefore, these illustrations are basically for recognizing and measuring additional labor in detail-finished objects. YZFS records the calculation of labor in finishing work as:

Assembling and making joints for every bracket set count 40% gong in addition to that of making these components in a bracket set.

其鋪作安勘絞割展拽每一朵取所用斗棋等造作功十分中加四分。27

For brackets at corner, (their final design is) based on their use. Every bracket set with 4 or 5 puzuo count additional 80% gong of the making of its components as

26 Fu Xinian, Zhongguo gudai jianzhu gongcheng guanli he jianzhu dengji zhidu yanjiu, 286.
27 Li Jie, Yingzao fashi, juan 17, 12a.
its *gong* of assembling and making joints. If a bracket set is over 6 *puzuo*, its *gong* of assembling and making joints counts as the same of making its components.

凡轉角鋪作，各隨所用。每鋪作斗拱一朵加四鋪作五鋪作取所用斗拱等造作
功十分中加八分為安勘絞削展拽功，若六鋪作以上加造作功一倍。²⁸

The *gong* of all joints-making of columns and beams counts as 40% of the *gong* of making.

凡安勘絞削屋內所用明間柱額等加造作名件功四分。²⁹

The last collection of illustrations (collection 9) is “Zhuanjiao puzuo” 轉角鋪作 (Corner bracket sets). It uses a three-dimensional drawing technique to depict the assembled condition of the bracket set on corner columns.³⁰ This information is not explicitly listed in the “Zhidu” section but in the “Gongxian” section (juan 18). The “Gongxian” section records the number of different kinds of pieces in each type of bracket sets like *bujian puzuo* 補間鋪作 discussed above.

The relationships between the illustrations and texts in YZFS demonstrate the purpose of the book: the standardization of labor cost. Given the consistency of the illustrations’ layout and organization with that of the “Gongxian” section, I suggest that the standardization of form was partially a byproduct of the standardization of labor cost. YZFS was never a builders’ manual guiding the construction in terms of its form, but rather served to estimate the amounts payable to artisans for certain types of work. These drawings functioned as tools for officials to check the finished work rather than to guide officials in the direction of building practice.³¹

Even though Li Jie put in a lot of effort recording architectural practice from artisans, the information in YZFS is still fragmental in explaining making parts. The motivation of this book

²⁸ Li Jie, *Yingzao fashi*, juan 18, 10a.
²⁹ Li Jie, *Yingzao fashi*, juan 19, 3a.
³⁰ Chen Wei, “*Yingzao fashi tuyang yanjiu*.”
³¹ Carpenter has the skills of design which may not be transferable on paper.
for officials’ use was never for learning construction thoroughly but supervising and avoiding cheating and corruption. The absent content of aesthetic and structural selection within the book leads us to the investigation of builders’ unrecorded techniques and influences in construction.

**Jiangnan influences**

The regulations in *YZFS* were not intended as a top-down directive for imperial use but rather arose from the bottom-up collection of existing artisanal knowledge and aesthetics. One such style, the Moon-shape beam (*yueliang 月梁*) captures the transmission from the local to the imperial aesthetics and interests. Compared to the other techniques in *YZFS*, this style was unique. This style became so important and fashionable in the capital city Bianliang (today Kaifeng) of the Northern Song Empire that *YZFS* needed to regulate its labor cost.

The Moon-shape beam is a beam with curved shape at two ends (Figure 7). It is a very recognizable construction feature from Jiangnan, a region in the southern reaches of the Yangtze River, 700km away from Bianliang. It is a special kind of beam in terms of its form but not its structural function. In the “Zhidu” section, Li Jie recorded the Moon-shape beam and its treatments. In the “Gongxian” section, Li Jie listed Moon-shape beam in contrast to the straight beam (*zhiliang 直梁*) with different measurement of *gong*: making a Moon-shape beam of 6.7 *chi* (about 2 m) or making a straight beam of 8.5 *chi* (about 2.6m) is counted one *gong*. Thus, a Moon-shape beam was more expensive than a straight beam of the same length. Therefore, using the Moon-shape beam in imperial projects was more about aesthetic preferences than from an

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32 Common sense in academia and can be proved from Li Jie’s introduction. See “Xinxiu Yingzao fashi xu” 新修營造法式序, in *YZFS*.
33 Moon-shape beam can be translated as Crescent beam as well.
economic perspective. Regulating its labor by the imperial bureaucracy into the book demonstrated that regional expressions had already been incorporated into an imperial aesthetic convention.

It is reasonable to believe that Jiangnan artisans’ techniques and preferences were brought by Jiangnan artisans who were already well-aware by Li Jie in Bianliang when he determined a relatively higher price for the Moon-shape beam. An example in Northern China is the main hall in Chuau’an Temple, built by Yu Hao, a master carpenter from Jiangnan. He moved to Bianliang and built significant temples in the capital.

From the 13th to 15th centuries, craftsmen often moved between northern and southern China. By comparing shapes of bracket sets from extant examples in north and south China, scholars found evidence which suggest northern styles have influenced Jiangnan in the Yuan dynasty as well as Jiangnan styles had influenced north. I suggest the Moon-shape aesthetic preference could also justify this kind of communication around that period. In the Ming dynasty, artisans from Jiangnan still played important roles in imperial construction of its capital city: Beijing. The moving of the capital city of the Ming dynasty from Nanjing to Beijing caused migration. In the historical record, the chief artisan (carpenter) responsible for building the Forbidden City was Kuai Xiang, originally from Suzhou, the center of Jiangnan.

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Furthermore, the presence of moon-shape glazed-tile beams suggest this regional transfer of craftsmanship knowledge. And this aesthetic choice detached from its structural role found on the buildings constructed in the early Ming’s construction (early 15th century). The real timber structure was made in a straight-beam style. These tiles are merely decorations in the shape of beams on the sides of these buildings (Figure 8). These glazed-tile beams can only be before the consolidation of a standardized imperial architectural style. Buildings that have these tiles can be found in the inner court of the Forbidden City where the early Ming structure were best preserved: Chuxiu gong 储秀宮, Yikun gong 景坤宮, and Zhongcui gong 鐘粹宮.37

These beams do not match the exact shape of the structural beams: the structural beams are straight beams. But the structural beams have components in the similar form as that of the glazed-tile beam. For example, the small column on top of the Moon-shape beam is called Mellon-shape column (guazhu 瓜柱).38 And the feature at the connection of the Moon-shape beam and the Melon-shape column is called “olecranon” because of its shape (Figure 9). This detail was also more common in south China than in north China at that time.39 There is no written source about the exact groups of artisans responsible for the timber work and glazing work, but the physical evidence suggests that craftsmen trained in south China were responsible for this early Ming work. Unfortunately, only a few Ming structures still exist in the Forbidden City. It is reasonable to believe that other buildings might also have had this feature in the beginning but due to repeated renovations and rebuilding over the centuries few examples remain. Eventually the influence on architecture from Jiangnan faded away or was absorbed but the early influence from regional artisans from the 12th to 15th century indicates the interaction

37 Guo Huayu 郭華喻, Mingdai guanshi jianzhu damuzuo 明代官式建築大木作 (Nanjing: Dongnan daxue chubanshe, 2005).
38 Guo Huayu, Mingdai guanshi jianzhu damuzuo, 181.
39 Modern scholars have studied this feature as a typical style of early Ming buildings in Beijing but failed to point out its origin connect to its historical context.
between officials/imperial aesthetics and artisans’ techniques. Both imperial buildings and building guides like *YZFS* relied on regional artisanal practice.

**Conclusion**

“A craftsman’s mind is like a prime minister’s mind” 梓人之道類於相. This sentence by Liu Zongyuan 柳宗元 (773-819) indicates the skills of management, administration and governing of a chief craftsman in small local projects. But in imperial projects these skills are partly controlled by officials. *Gong* can also be understood as achievement in Chinese despite the narrow translation of it from *YZFS*, and I suggest the achievements of artisans are multidimensional and hard to discern. Architecture exists in lived practice. There was no single author of one premodern Chinese imperial building. *Gong* was about finishing the work on the contract from the perspective of literati but also had brought in traditions, aesthetics and creativities that lay beyond the guidelines recorded. Reading *YZFS* reveals the prioritizing of the logic of standardization of labor rather than that of architecture, and the latter shall be achieved only when the former is achieved. That means, to some extent, literati-officials had their limitations in architectural knowledge and architecture was partially in hands of artisans in imperial China. The interactions between the officials’ methods of regulating labor and the autonomous power of the artisans in the certain historical period should not be overlooked.

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Conclusion

The arbitrarily assigned meanings of premodern Chinese architecture

Focusing on “perceptions” - how users receive and interpret architecture, rather than simply architecture and its original intention, the collection of the preceding chapters has illustrated different forms of interactions and that interactions between instances of architecture and its users shifted often over time. While each chapter is distinct, they overlap in their focus on helping us think about how architecture worked in both natural and societal environments. Each chapter focuses on a distinct term drawn from the *Yingzao fashi* 营造法式 (YZFS), chosen because of (1) accessibility of sources; (2) the terms complement one another to illustrate dynamism of aspects seeing architecture through classical canons, visuals, building elements, and labor. Together, the five chapters, while independent of one another, function to illustrate how the literati described and understood architecture. These terms are not exhaustive and this collection cannot be read as an overarching theory of premodern Chinese architecture. In concluding this selection and analysis of imperial architectural terms, I want to further clarify and explore the relationship between cultural meanings and architecture in the imperial period. Specifically, I suggest social order and the imperial hierarchical system were the *apparatus* behind cultural meanings associated with its architecture.

The connections between form and meaning have always been a major concern of both art and architectural historians. Many studies of the meanings of architecture in China are derived from Christian Norberg-Schulz’s work, *Genius Loci: Towards A Phenomenology of Architecture* and *Meanings in Western Architecture*, which investigates and interprets the intentions behind and influences of architecture.¹ His concept of “spirit of place” became a fundamental theoretical

framework for studying metaphysical aspects of traditional architecture used by Chinese scholars in historical studies. While Norberg-Schulz’s theories of symbolism, and the scholarship that has employed them, transformed the study of Chinese architecture, their focus has largely been on the creators of the architecture itself and the viewers’ “consistent” understandings of certain spaces. In focusing on the correspondence between forms and intentions from the idealized conceptions of buildings as understood from the perspectives of the artisans and the abstract sensibility from the perspective of the viewers, the narrative that develops is necessarily a partial one. In an attempt to further complete/complicate this narrative, I question the role and significance of architectural forms/spaces in meaning-making in relation to the imperial political nature.

Throughout this thesis I have argued that architectural significance is multi-dimensional and was determined by the broader social context and the rules of the imperial society at the time. The physical manifestation of architecture did not possess a consistent social value; rather, it was constantly reconstructed and made most meaningful through association with the imperial social hierarchy over two millennia. Indeed, premodern architecture had meanings. Certain features—patterns, colors, materials—could represent particular beliefs, certain names could represent traditions of metaphor as could a certain space represent a symbolic sacred quality. However, throughout the history, meanings were constantly invented and revised. While art and architectural historians seek to understand the significance guiding the use of certain

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architectural symbols, features and forms, there remains an imperative to understand the disconnect between forms and meaning; that is, how meaning decays over time despite the continued use of such forms and philosophies. Focusing on modern architecture, Bill Hillier also similarly questioned architecture’s generic meaning and suggested that consistent meaning is absent. Building of Hillier’s interest whether architecture is meaningless. I develop the idea of a study: “arbitrarily assigned meanings,” that is, how meanings decayed over time and disconnected with architectural forms. Arbitrarily assigned meanings refer to lack of fixed value and static meaning. I demonstrate the relevance of Hillier’s concept to premodern Chinese architecture. I suggest what largely made architecture meaningful/significant was not the claimed metaphorical meanings encoded in form but the flow of power during and after construction.

In studying the architectural and political histories of imperial China, scholars have focused on its continuity in Chinese architectural culture and the cultural consensus of certain architectural features collected around the social and hierarchical system embedded in li 禮. An imperial hierarchical system developed in the Han dynasty with the creation of the Chinese empire.

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7 Li has an earlier history from the Zhou dynasty, but it was reframed for the establishment of the Chinese empire in the Han dynasty.
kind of political theory promoted by Confucian scholars, included historiography, social order, morality, and cosmology. *Li* was also a theory intending to prove the power legitimacy of the emperor from two stances: that of ancestors and the ultimate god in heaven (*tian* 天). The position as well as the physical being of the emperor was conceptualized as the ultimate person who could communicate with the ultimate god and as the proper descendent of the ancient noble kings. Here, *li* was just an abstract idea of social order from the imperial court’s vantage. The reconstruction of *li* (social rites and orders) by Confucian scholars in the Han dynasty conceptualized the newly emerged imperial social structure, which became the model for later dynasties over almost two millennia. *Li* became a kind of power structure, a kind of habitus for all people including the emperor himself—a static system of social positions.8

Architecture, using contemporary techniques and forms, maintained such *li* and became meaningful in relation to other architecture in the imperial system. Architecture was a kind of hardware and infrastructure of *li*. The establishment of imperial order was based on the construction of the meanings associated with the emperor.9 While the emperor sought power legitimacy through association with *li*, from the literati’s perspective, they sought to maintain this *li* by both knowledge and material construction. This maintenance required them to reinforce the signs of hierarchy, which could made from different objects and architectural features. The regulation of Chinese architecture was, under *li*, called *zhidu* 制度. In 1102, Li Jie 李誡 stated in the introduction of *Yingzao fashi* 營造法式 that, “Contemporary architecture should reflect the regulations that the Confucian canon described” 至或制度與經傳相合.10 Architecture was supposed to be made under the framework of *li*, a structure which should match the owner’s

9 Gan Huaizhen, *Huangquan, liyi yu jingdian quanshi*.
Except some special buildings with designated forms and meanings, most halls in premodern China serving different functions were difficult to discern in isolation, so the meanings of architecture were usually constructed based on its physical position and appearance in relation to other buildings. Throughout the imperial period, when certain architectural features failed to serve the imperial hierarchical order, they were subject to change.

The interpretation of *li* was also flexible and reconstructed overtime by political change. Preserving the canon and symbols of *li* was preserving the power legitimacy. The meanings of *li* were the explanations of social order. The power of defining and interpreting *li*’s such meanings was the power of ruling the empire. The emperor/ruling class tried to make claims about how power was associated with *li* as well as its cosmology, thus presenting the power as inarguable. But an early philosopher Wang Chong 王充 (27–97 CE) was criticizing that fact; that is, he pushed against the claims of *li* as having meaning because it was an order from the heavens. Wang Chong claimed that connection between the ultimate god and the emperor was unconvincing, which was an early example of challenging both *li* and thus, by extension, of architecture. He suggested meaning was created to be a cosmological and ideological construction but lacked logic. At that infant stage when *li* was developed as an imperial political guide, Wang Chong’s critic was vocalized disagreement of the cosmological consistency of *li*, which demonstrates that these meanings created for ruling should not be interpreted wholeheartedly as the reason of creating things, but it was the function that was the intention of

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12 Li Zehou 李澤厚, *You wu dao li, shi li gui ren* 由巫到禮 釋禮歸仁 (Beijing: Shenghuo·dushu·xinzhi sanlianshudian, 2015), 78.
13 Scientific instruments were included in the system of *li* in the 18th century. A universal order should under the control of the imperial court.
14 Watanabe Shin’ichirō 渡辺信一郎, *Zhongguo gudai de wangquan yu tianxia zhixu* 中國古代的王權與天下秩序 (Beijing: Zhonghua shuju, 2008), 98.
creating things. Wang Chong criticized the metaphor which linked divine space to the palace of the emperor:

The Spirit of Heaven dwells in heaven just as a king in his residence. A king lives behind many gates, therefore the Spirit of Heaven must stay in some secluded place likewise. As the king has his palaces and halls, Heaven also has the T'ai-vei [Taiwei], Tse-kung [Zigong], Hsan-yuan [Xuanyuan] and Wen-ch'ang [Wenchang] mansions. A king being far from men does not know their occult crimes. How could the Spirit of Heaven in his four palaces see the secret misdeeds of men? If a king hears of the faults of his subjects, he learns it through others. If Heaven becomes cognizant of crimes of men, it must have it from its angels. In case the spirits are Heaven’s informants as to crimes, it must also entrust the spirits with retributive justice. Such being the case, the so-called anger of Heaven is not that of Heaven, but of the spirits.\(^\text{15}\)

天神之處天，猶王者之居也。王者居重闕之內，則天之神宜在隱匿之中；王者居宮室之內，則天亦有大微、紫宮、軒轅、文昌之坐。王者與人相遠，不知人之陰惡；天神在四宮之內，何能見人鬬過？王者聞人鬬，以人知；天知人惡，亦宜因鬼。使天問過於鬼神，則其誅之宜使鬼神；如使鬼神，則天怒，鬼神也，非天也。\(^\text{16}\)

Even though the construction of metaphorical meaning behind imperial power was not perfect to some degree, the legitimacy of its power and the social order were the essential messages that needed communicating. The meaning of architectural features over the imperial period of Chinese history was not static. From the perspective of ruling class, a more static thing or a thing more needed to be static was the imperial and social hieratical system; more specifically in architecture, that is the hierarchical differences in its appearance preformed in social lives.

In a series of 18th century depictions of temporary imperial palaces for inspection tours (xinggong 行宮), painters depicted the architectural features that indicated the presence of the

\(^{15}\) These lines were translated by Alfred Forke and modified by author. See Ch’ung Wang, Lun-Hêng, trans. Alfred Forke. (Leipzig: O. Harrassowitz, 1911), 71-72.

\(^{16}\) Wang Chong 王充, Lun heng 論衡 (Beijing: Zhonghua shuju, 1990), juan 6, 301.
royal court and the emperor himself during his travels around the empire (Figure 1). Previously standard temples or mansions, the addition of particular forms, colorful décor on buildings and the ceremonial dressing of guards of honor, indicated a new significance of the place (Figure 2). However, after the departure of the emperor and the removal of such forms, the temple took on a different meaning. The ways in which the temple was retrofitted to serve new purposes aligned closely with the shifting and flexible meanings of architectural forms more generally during the imperial period. Rather than assigning abstract value to the individual buildings, to understand their significance we must analyze them within the context of the ranking system that sought to clearly differentiate social class. That is, the rules associated with architectural difference were more important than the physical manifestation of those differences. The architectural features of such temporary imperial palaces did not need to be built or decorated like the actual palace in the capital city in order to function as a place for the emperor. Instead, the hierarchical relationship could be shown with the new naming zhengdian 正殿 (the main hall), since dian was a name of the superior architecture--for imperial architecture and religious architecture. Moreover, with its temporal decoration in comparison to other buildings around, it was conceptualized and functioned as a superior place. Thus, the relationship between meanings and symbols was not one-dimensional. That means, the hierarchy of architecture was not only represented by hierarchical symbols (e.g., colors, the number of bays, and decorative patterns) but also based on a broader context.

In general, as older meanings decayed, new meanings (or what was claimed to be the original meaning) had to be constructed in order to reify the imperial power. Textual meanings and their materialization were always in a circuit of recreation and reference. Overemphasis on defining the historical value attributed to a particular feature potentially obscures the way original actors

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17 Shi Jingfei 施靜菲, “Cong ‘qi’ dao ‘li’ de shijian: qianlongchao Huangchao liqi tushi zhong de jiqi” 從「器」到「禮」的實踐：乾隆朝《皇朝禮器圖式》中的祭器, Gugong xueshu jikan 故宮學術季刊 37, no. 4 (2020): 44.
understood the rationale for the inclusion of that feature at a given time. Indicating the dangers of this decay and the imperial awareness of the phenomenon, in the preface of the Illustrated Regulations for Ceremonial Paraphernalia of the Imperial Qing Dynasty (Huangchao liqi tushi 皇朝禮器圖式), Emperor Qianlong wrote: “(I) thought of the makers of these objects as ceremonial paraphernalia. If they made these objects with delicate intention, then the objects preserved. If later, holders didn’t seek to understand the intention, then the objects would be corrupted. In order to avoid such fake explanations, there are two methods: inheritance and learning meanings.”[18] This quote demonstrates both the importance of the power of the royal court in the explanation of li as well as the regulations (social orders associated with li).[19] The reinforcement of meaning directly related to the preservation of imperial power. Thus, it was not the meanings that were important but rather order those meanings implied. Specific symbolic meanings of architecture might not be comprehensible or accessible to people from different social classes. But the imperial power system needed to be legible and communicable by what the objects and symbols implied and controlled.[20] Certain conditions may cause changes of position and then, the change of meanings.[21] Thus, architectural features did not have either intrinsic and static meanings.

The study of arbitrarily assigned meanings is to investigate the disconnection between architectural features and meanings. Meanings were recorded based on the intentions that the creators might have had but what mattered was the level of understanding of its the users. In the

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[20] The separation between dao 道 and qi 器. Architecture was a kind of qi. See Wu Qingzhou, Jianzhu zheli, yijing yuwenhua, 30.

[21] Wu Qingzhou thinks the changes over dynasties were based on rational judgements of design. Wu, Jianzhu zheli, yijing yuwenhua, 7.
following section, I discuss three distinct categories in which architectural meanings decayed, fluctuated, and shifted according to physical, spatial, and linguistic norms. Through a close examination of specific examples within each of those categories, I show how the association between architecture and imperial power/legitimacy was maintained.

First and foremost, the architectural physical forms that indicated meanings were less important than the fact that viewers could discern such difference. Second, resulting in flexible and inconsistent architectural associations, the imperial invention of meanings of architectural construction was the tool to establish and announce power. Moreover, even when certain place names had specific associations at particular moments in history, these place names could be maintained despite being divorced from those original meanings; kept in practice and preserved over time in the hierarchical system but not meaningful in their original sense. In comparison to surrounding buildings, certain hierarchical relationships could be shown without explicit meanings.

**Decay of Meansings in Physical Forms**

The specificity of the meanings of particular architectural forms decayed over time, and is visible when comparing different imperial constructions. From the Tang and Song dynasties to the Qing dynasties, the importance of bracket sets decreased in the timber-frame construction. For example, during this change, the structural element *ang* 大 lost its structural significance but its form was kept as an important fixture in the developed timber-frame structure. *Ang* used to be an important independent tilted structural feature in bracket sets before the 13th century, which

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22 Han Baode named the more rigid structure in the Ming and Qing dynasties as Formalism (*xingshi zhuyi* 形式主義). For more discussion, see Han Baode 漢寶德, *Ming Qing jianzhu er lun: dougong de qiyuan yu fazhan* 明清建築二論：斗拱的起源與發展 (Beijing: Shenghuo·dushu·xinzhi sanlian shudian, 2014), 41.
included *shang’ang* 上昂 and *xia’ang* 下昂 (Figure 3).\(^ {23} \) *Xia’ang* worked like a tilted lever in bracket sets (a triangular structure) to support purlins and the roof. At that time, *ang* were a common structural feature in bracket sets in imperial architecture as well as some temples in small villages (Figure 4).\(^ {24} \)

In the later dynasties, many structural features were abandoned because of the development of timber-frame structural techniques.\(^ {25} \) Therefore, *ang* gradually lost their structural meanings. From the extant examples from different periods, it is evident that around the 11th century, a purlin was inserted directly above a column to transmit the weight from the roof (Figure 5). That is, *ang* gradually faded in their structural importance—they no longer bore the weight of the overhead roofing.\(^ {26} \) Despite this, they still existed in bracket sets as a formal/aesthetic choice for high-standard architecture. The contour of *shang’ang* was kept in the general shape of interior bracket sets but *shang’ang* itself merged into bracket arms (Figure 6 & 7).\(^ {27} \) The head of *xia’ang* retained its form in the general shape of exterior bracket sets, and the tail of *xia’ang* disappeared. But in some cases when the exterior bracket sets were visible from the inside, the bracket sets were made with the whole shape of *xia’ang*, which was called *liujin dougong* 滴金斗拱 (golden bracket sets). In this kind of *liujin dougong*, *xia’ang* was not an independent structural element. The head and the tail of *xia’ang* were like attachments to the bracket arms meant only to maintain the traditional appearance of the form.

\(^ {23} \) *Shang’ang* and *xia’ang* were independent elements in bracket sets in *Yingzao fashi*.

\(^ {24} \) Temples (local and imperial) and imperial constructions were usually built by higher standards with bracket sets compared to local residential houses without bracket sets. Early examples of *ang* in local temples also include Ying’gan Temple, Longmen Temple, and Fotou Temple in Changzhi, Shanxi Province.

\(^ {25} \) In the 12th-13th century examples, some “fake” *ang* (without structural meanings) had existed but were not the majority in the structure. In the later centuries, the percentage of “fake” *ang* increased over time. In the Qing dynasty, there were no structural *ang* in construction.

\(^ {26} \) *Ang* in Fo Guang Temple’s Main Hall (the middle example in the upper row of Figure 5) shows how the triangular structure works.

\(^ {27} \) Zhu Yongchun 朱永春, “*Yingzao fashi* zhong de qidonggong bianxi” 《營造法式》中的“騎斗拱”的辨析, *Zhongguo jianzhushilun huikan* 中國建築史論叢刊, no. 02 (2013): 280–85.
While Ang originally had structural meanings, it was later reproduced without its original meanings.\textsuperscript{28} The structural change just happened over time and artisans followed the aesthetic tradition without questioning the specificities of the shape. I suggest, what made this maintenance of form succeed was the preference of the impression and the aesthetic tradition of how a superior architecture should look, as timber-frame technology had developed and did not need the structure anymore. It was no longer a reasonable structural choice and became an aesthetic choice. Thus, the relationship between the intention and the maintenance of the physical form transformed from timber-frame structural rationale to social-political structural rationale.

In the late imperial era, ang was only an inherited formal feature for top-ranked high-quality architecture without specific structural meanings. The preservation of ang’s form reflected the transformation from a structural element to a unique decorative feature/appearance that was reserved for mostly imperial construction. Thus, the particular structure/shape itself was not primarily associated with the meaning it was originally prescribed. The shape did not have a specific meaning and became a sign of high-rank architecture, and a reminder of social order.

**Decay of Meanings in Spatial Forms**

Single premodern Chinese architecture with different function (e.g., palaces, temples, and city gates) shared similar appearance. Their different purposes of use usually affected the layout of the site (i.e., spatial forms) but not the appearance of one building (i.e., physical forms). In

\textsuperscript{28} Feng Jiren points out that flower sprays with “petals” were made connections with the shape of ang in literature quoted by YZFS. But this linkage is more about the literary interpretation based on the existing ang but not the intentional purpose of making such shape. See Jiren Feng, *Chinese Architecture and Metaphor* (Honolulu: University of Hawai’i Press, 2012), 166-167.
contrast to the decay of meanings associated with particular structural forms, the change in spatial forms through the imperial period was highly intentional and directed by the emperor as a way to establish and announce power.

Spatial meanings were not always preserved over time as they were claimed in the beginning. Various forms or symbols could have the same or similar meanings, which is the connection between the emperor and the gods in heaven. In historical texts about the making of political or architectural decisions, recorders usually used a vague word jiuzhi 舊制 (former rules), which referred to following the ancestors’ ways of doing without an explicit explanation of meaning. Together with the concept of the emperor’s relationship with the ultimate gods, this kind of idea of respecting ancestors framed the imperial Chinese ways of theorizing both the environment and power.29 While each imperial government insisted on particular spatial organizations of temples, palaces, etc. based on their particular readings of tradition and rites (li), the layouts were not consistent throughout the imperial period.

The divine space was a reflection of human space,30 but later the creators of human space claimed they designed it by referring it to the divine space. Architectural forms did not necessarily carry meanings for the later dynasties but the meanings themselves were reinvented and reconstructed and thus, new architectural forms were built. Architectural construction happened along with imperial ideological construction. For example, as I discussed in the first chapter of gong, when the use of gong 侖 for imperial palaces was elevated in the Han dynasty, Chinese astronomers divided the cosmos into five gong (five sections). The center section which contained the Purple Forbidden enclosure (zi wei yuan 紫微垣) was called the center gong

30 Wu, Jianzhu zheli, yijing yu wenhua, 358.
(zhong gong 中宫). In the Han dynasty, philosophers drew connections between the divine space (outer space) with the human’s space. However, its contemporary palace (i.e., Changle Palace) construction did not follow this specific abstract metaphor (spatial hierarchy) to put the palace in the center of the city, but depended more on existing contexts including roads and palaces from the Qin dynasty. That indicates, architecturally, embedded meanings did not need to follow the abstract diagram. Thus, the significance of such meaning was not attributed largely to architecture.

The name gong for the constellation was attributed after the naming of gong for architecture. In other words, architecture gave the gong meanings for the cosmos and later this cosmological meaning affected the naming of architecture. The master plan of the Han palace did not preserve or carry its meaning to the later dynasties. Even though the Han palaces claimed to have mimicked the cosmos, these kinds of forms, embedded with such meanings, were not inherited by later dynasties. Every dynasty had its own inventions of meanings and forms. In the Ming dynasty, the imperial palace (the Forbidden City in Beijing) was named after zi wei constellation and the builder/designer proposed planning a new palace. Its planning seemed to be a literal copy of a cosmos and followed the ancestors’ “codes” without reference to the early palaces that claimed to be metaphorical forms of cosmos. Thus, even concepts of what counted as fixed cosmos and the linkage were constantly in flux.

31 Feng Shi 馮時, Zhongguo tianwen kaoquxue 中國天文考古學 (Beijing: Shehui kexue wenxian chubanshe, 2001), 276-277.
32 Yang Kuan 楊寬, Zhongguo gudai ducheng zhidu yanjiu 中國古代都城制度史研究 (Shanghai: Shanghai renmin chubanshe, 2003), 104.
33 Li Chun 李純, “Zhongguo gongdian jianzhu meixue sanweilun” 中國宮殿建築美學三維輪 (Wuhan University, 2011), 73.
Moreover, I want to suggest the invention of the linkage between form and meaning, even with a similar meaning, could use various architectural forms when it was needed by the ruling class including Confucian officials and emperor. Even though literati knew of the classic “capital city plan” of the Zhou dynasty, which was described in canons of li, there was no capital city built like it exactly.\(^{35}\) During the Han dynasty, jiaosi 郊祀 (suburban sacrifices: a kind of state sacrifices offered near the capital city) was invented by the court and it was believed to be a more proper ritual to communicate with the ultimate gods.\(^{36}\) Therefore, the Han court asked to build temples for this proper rite (li 禮). The temple was centered with a circular platform altar (yuanqiu 圓丘). This kind of temple was essential and necessary to almost all later dynasties in terms of power legitimacy.\(^{37}\) That circular shape helped the claims of imperial power. However, in the Ming dynasty, when the Emperor Jiangjing 嘉靖 felt insecure about his power, he ordered for temples to be rebuilt and added around Beijing in addition to the yuanqiu.\(^{38}\) He invented a tradition that gods were needed to be worshiped in different temples instead of one: yuanqiu. The construction of temples was a method for the reestablishment of li as well as the emperor’s power. In other words, when li and the architecture that represented li could not function as symbols of imperial authority, they needed to be reconstructed. The meanings of architecture in these circumstances functioned more as attachments to the power legitimacy. Therefore, a meaning that claiming the linkage between emperor and heaven had more than one


\(^{36}\) Gan Huaiqian, Huangquan, liyi yu jingdian quanshi: zhongguo gudai zhengzhishi yanjiu, 69.

\(^{37}\) Watanabe Shin’ichirō, Zhongguo gudai de wangquan yu tianxia zhixu, 128-150.

\(^{38}\) Zhao Zhongnan 趙中男, Mingdai gongting dianzhi shi: shang 明代宮廷典制史 上, (Beijing: Zijincheng chubanshe, 2010), 186.
interpretation. When the imperial power was in danger, such meanings were not convincing despite their forms.

Thus, overtime, the legitimacy of the associations between imperial power and spatial forms were reworked and redesigned to better assert the hegemony of the emperor. Architectural features were manipulatable via the contemporary imperial-preferred understanding of *li*.\(^3^9\) If forms could always represent original meanings as the court claimed and could communicate with the ultimate gods, why did these forms need to be modified so many times? As the meanings of *li* were constructable, the architectural meanings were also unstable and fragile. The most important thing was the forms’ ability to transmit a simple message: the placement of power but not the detailed metaphorical connects.\(^4^0\)

**Decay of Meanings in Linguistic Form**

Meanings for a place do not need be conveyed through architectural forms or landscape; names had the ability to demonstrate certain meanings as well as relationships.\(^4^1\) In general, particular administrative titles were associated with specific buildings based on the court activities that occurred therein. The preeminence of those buildings, and thus those titles, was determined by their proximity to the emperor. However, and over time, either those buildings ceased to exist or those positions no longer denoted the same type of work; however, the administrative titles

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\(^3^9\) For example, *liu zong* 六宗 (six origins) in “Yin liu zong” 維六宗 has multiple explanations which was recorded in *Tong dian* 通典. Accessed via ctext.

\(^4^0\) Dimension of the Circular Mound Altar (*yuanqiu* 圓丘) in the Temple of Heaven (*tiantan* 天壇) in Beijing referred to the sacred numbers. See, *Daqing huidian tu* 大清會典圖, juan 1, 10b. 1899 edition.

associated with particular buildings, such as yushi tai 御史臺, and diange daxueshi 殿閣大學士 (Great Scholars of Grand Halls) remained in use.

A position within the administration was named and inherited after the architecture / place of the office was named. The name of the Central Supervision authorities remained in the administrative system for centuries without the physical form being inherited since around the end of the Six Dynasties period. The Central Supervision authorities were established in the Qin dynasty. Around that time, architecture built on and around a tai 臺 (rammed-earth platform) was a fashionable and standard form for high-quality architecture in imperial palace. As a result, in the Han dynasty, the naming of these departments included the architectural form: tai. The central supervision authorities was named as yushi tai 御史臺. This name was used until the Ming dynasty, even though tai as an architectural form was no longer in use by the central supervision authorities and many other offices had abandoned the naming of tai since the Tang dynasty.

The name of a particular building could also be granted as an honorific title which did not have practical meaning. In other words, the official who had the title did not work in that place. Such an honorable title was about a placement of that person in an imperial hierarchical system.

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43 At least in the Tang dynasty, literati believed the yushi tai 御史台 was a specific building (i.e., a multistory building on platform) in the royal palace. See Liu Yuanlin’s 劉淵林 commentary on Zuo Taichong’s 左太沖 “Weidu fu” 魏都賦 in Wenxuan 文選. Xiao Tong 蕭統, ed., Wenxuan zhu 文選註 (Shanghai: Shanghai guji chubanshe, 1986), juan 6, 271.

44 For the development of the Central Supervision authorities in the Song dynasty, see Yu Yungong 虞云国, Songdai toujian zhidu yanjiu 宋代台諫制度研究 (Shanghai: Shanghai shehui kexueyuan chubanshe, 2001).

45 Zhang Zhi’an 張治安, Mingdai jiancha zhidu yanjiu 明代監察制度研究 (Taipei: Wunan tushu chuban youxian gongsi, 2000).
relative to the emperor which stemmed from the relative position of the certain buildings within the imperial palace.\textsuperscript{46} In the Ming dynasty, \textit{daxueshi} 大學士 (Great Scholar) was a title for the secretaries who directly reported to the emperor, and sometimes they were in charge of the education of the princes in \textit{Wenhua dian} 文華殿 (Hall of Literary Prosperity) in the Forbidden City. Gradually, this position became more important in the administrative system and this title became complicated. Five more names of halls in the Forbidden City were added to the \textit{daxueshi} and they were altogether called \textit{diange daxueshi} 殿閣大學士 (Great Scholars of Grand Halls). In the Qing dynasty, despite that the original duty of \textit{daxueshi} was diminished, the six-level-ranked titles were inherited and became honorable titles for the top-ranked officials.\textsuperscript{47} Thus, these place names did not mean their specific space or the purpose of the space. Rather, it showed the close relationship between the title owners and the emperor which mirrored physical relationship between these halls and the center hall (i.e., Hall of Supreme Harmony) in the Forbidden City.

The name of a particular building could function like idioms of status in the imperial administrative system. The maintenance of these architecture-related titles was a result of the hierarchical association between the title bearer and the emperor, not the title bearer’s actual professional capacity. The importance of the maintenance of the title, well beyond the actual relevance of the place itself, stemmed from its ability to differentiate status and power within the imperial court hierarchy.

\textbf{Meanings in Context}

\textsuperscript{46} Yan Buke 閻步克, \textit{Zhongguo gudai guanjie zhidu yinlun} 中国古代官階制度引論 (Beijing: Beijing daxue chubanshe, 2010).
\textsuperscript{47} \textit{Qingding daqing huidian} 欽定大清會典, \textit{Siku quanshu} edition, juan 2, 1a-1b.
Physical and conceptual greatness did not necessarily correlate, but rather were determined by other aspects in society: hierarchical relationship. Architecture that had the same appearance could have different meanings. A roof tile’s color was an important status marker of a building in tradition China. Yellow glazed tile was restricted by imperial use in the later dynasties. However, a random three-bay yellow-tile building in the forbidden city and a similar building in a regular block in Beijing City could have very different statuses, which could be the emperor’s servants’ place in the palace and imperial-acknowledged local gods’ place in a local context respectively. There was no record about the exact meanings of the yellow-tile roof in both cases but the hierarchical relationship in relation to their respective contexts was preserved and transmitted.48

Arbitrarily assigned meaning here do not mean architecture has no value. Rather, meaning had layers; meaning decayed and could be reinvented by its transmission in time and space. Different people might only be able to perceive certain depth of meanings. Metaphorical meanings could be add-on to legalization and performance of power and order. Establishing order could be the essential meaning and the reason of inventing meaning. In this concluding section, I have sought to encourage reflection about the extent to which the meanings were maintained, reconstructed and decayed with architectural features over time. Making copies did not necessarily indicate the transmission of metaphorical meanings, but rather, a transmission of power. Architectural features under modern interpretation might not be thoughtful art creations but only artifacts following rules or assemblages of elements referring to local political situations. This phenomenon is evinced not only in the history of Chinese architecture but also in contemporary China. For example, shanzhai 山寨 (roughly reproduced) architecture like “Capitol Hill” in a Chinese town does not necessarily mean people wanted the political meanings behind the

48 Beijing shi Dongchengqu wenhua he luyou ju 北京市東城區文化和旅遊局 and Beijing shi Dongcheng qu wenwu guanli suo 北京市東城區文物管理所, Donghua liuyun 東華流韻 (Beijing: Beijing chubanshe, 2019), 94.
symbolized Capitol hill as it was in the US. Rather, it was a wish of the local Chinese people to experience some foreign “culture,” which is an escape from their old living style, a sign of higher quality living, and thus a symbol of economic power.

There was no single author of making premodern architecture. Architectural knowledge was blended in a larger social, political and cosmological knowledge. In other words, architectural knowledge could be approached by different perspectives. Architectural culture is constantly reconstructed in two millennia. The form must be put in the specific context and not assumed to have consistent meaning over time. Concepts about architecture from users’ perspectives is transmitted through building methods, architectural elements and its imagery. They appear in the media of writing, drawing and building. Architecture has to be in conversation with nature (divine nature, environmental nature, and socio-political nature). It is a part of environmental nature, like that of mountains, trees and streams that humbly co-exist with each other. And it is a part of social nature that prescribes architecture’s roles. Its naturalness is rooted in people’s lives and never lives apart from its users.

In this research, I have combined textual and visual analysis of architectural examples in order to investigate premodern understandings of Chinese architecture that go beyond established construction methods and metaphorical philosophy. Through this excavation of the historical archive, my investigation unearths a different way of viewing not only the historical time period I examine but also the way we think about architectural terms today. Instead of a focus on

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50 For further discussion about Chinese philosophical ideas about culture and nature, see Yuk Hui, The Question Concerning Technology in China. An Essay in Cosmotechnics (Falmouth: Urbanomic, 2017), 18-33.
building as the sequence of steps needed to raise an architectural structure, I begin to think of building as a particular way of living life that values users in a particular manner. Instead of intentions, understanding the meaninglessness of architecture is to study the ways that actual users read architecture in historical time. For the ruling class, there could be features which symbolized the power legitimacy; but for the ruled class, these features were just symbols of power and the social order.

Architectural history does not end with the demolition of the physical buildings. It moves forward, and still on. The history of architecture is about the influences and uses (understanding and thinking) of that building in society over time. After all, a building is never merely a building: it represents and functions as a part of culture and politics — a way of seeing and being in the world. Perhaps it is time to see things anew, in an old way.
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