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Zhang Jinqiu's Museums in Xi'an: Interpreting the City's National and Cultural Identity Through the Design of Contemporary Museum Architecture

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Zhang Jinqiu's Museums in Xi'an: Interpreting the City's National and Cultural Identity Through the Design of Contemporary Museum Architecture



Senior Project Submitted to
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of Bard College

by Zijiao Li

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For my mom, thank you for visiting the sites with me and always being supportive.

I dedicate this project to the ancient city Chang'an and its profound history.

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Introduction: Redefining Xi'an: Memories, Changes, and Relevancies

Born in Xi'an, China, I knew that I lived in a historic city at a very young age. Not everybody would pass by the Giant Wild Goose Pagoda every morning on the way to elementary school or climb on the City Wall decorated with auspicious lanterns to celebrate the Spring Festival with the family.

In my child's mind, I had no idea in which dynasties these buildings were built, but noticing the erosion on the wooden eaves and weathering of the brick walls, I could tell that they must be hundreds of years old. As I grew up, the city has changed tremendously. Almost every place had gone through specific reconstruction, either establishing new or repairing old structures; in most cases, the government chose the previous option. Within every few months, a new building would be ready to replace the old one. Numbers of ancient monuments have been destroyed in this urban regeneration. Additionally, more and more buildings that are either traditional or modern began to emerge. Their origin and aesthetics attracted my attention and has become one of the main concerns of this paper.

I started researching architecture in my neighborhood, that is, around the 1300 years-old Giant Wild Goose Pagoda, and realized how many of them are my age or even younger, and how old and awkward they look like. The 1980s to 2000s, was the first generation of the "neoclassical" building. For example, "Tri-Tang Projects" finished in 1988, and the Shaanxi History Museum completed in 1991. The Tri-Tang Projects is an architecture complex of three different buildings that are all influenced by the Tang dynasty's architectural style, including Xi'an Garden Hotel (*Tang Hua* Hotel), the city's first luxury hotel, an exhibition hall for Tang artifacts, and a Tang-themed fine restaurant (Figure 0.1). Situated next to the real Tang pagoda,

Tri-Tang Projects often delude people into believing that they are the few surviving ancient monuments by appearances, locations, and even names. Similarly, the Shaanxi History Museum also appears in a classical look. More strikingly, I was surprised that these buildings were designed by the same woman architect, Zhang Jinqiu. Later I discovered that it is not a coincidence. Her work is everywhere in Xi'an, steadily promoted by the local government, as the authority needs new architecture to establish its new policies.¹

Ever since 1993, the Shaanxi provincial government has launched a plan for the Qujiang Tourism Resort Area, later became the Qujiang New District, targeting on tourism and cultural heritage industries. Its ambition was to transform Xi'an into an international metropolis, as flourishing as Chang'an, the predecessor of Xi'an, capital of the Tang dynasty, and to revive the Tang culture Chang'an. One of the earliest and most important projects is the Tang Paradise opened in 2005 (Figure 0.2). As the largest theme park of the Tang dynasty in China, it occupies 4 square kilometers, which resembles the architectural style of the imperial park, Fu Rong Garden, and is built on the ruined site of the original garden.² It now welcomes over 40,000 tourists every day and has become one of the must-see attractions in Xi'an.

After the success of the Tang Paradise, not only the Qujiang New District but the entire city began to promote the Tang culture by building more architecture in a traditional architectural style. Most of the constructions are closely linked to the architect, Zhang Jinqiu, who also created the Tang Lotus Garden. The connection between Zhang and Xi'an is similar to the

¹ Peter G. Rowe and Seng Kuan, *Architectural Encounters With Essence and Form in Modern China* (Cambridge: The MIT Press, 2002), 177.

² Tang Paradise is the official translation for *Da Tang Fu Rong Yuan* 大唐芙蓉园 in Chinese, which directly translates as the Lotus (芙蓉*Fu Rong*) Garden of the Great Tang Dynasty. It is also referred as the Tang Lotus Garden.

relationship between Antoni Gaudí and Barcelona because the city is home to most of the architect's work.

Born in 1936, Chengdu, Sichuan, Zhang received her bachelor's and master's degree from Tsinghua University, the School of Architecture founded by Liang Sicheng. Listening to a school leader's suggestion, Zhang headed Xi'an right after her graduation in 1966, to help rebuild the city using her imagination about the city's history, but she was surprised by how lacking this wasteland it was. She recalled that in Beijing, she would go to the cinema often, but it was impossible in Xi'an.³ Since then, the architect has participated in all important architectural projects in Xi'an, and within the greater Shaanxi Province. Zhang's work walked a fine line between unabashed revivalism and a sense of contemporaneity.⁴ Hopefully, her dream of Xi'an has come true, following her synthesized architectural vocabularies, impacted by both the Tang and western style. Zhang regards the harmony between nature and humanity the most considerable aspect of her work. She asserts four primary focuses in architecture: balance in nature, dynamics in space, unity in time, and empathy with humans.⁵ The architect believes in traditional Chinese philosophy and adapts it into her designs, which Chang'an Tower that I will discuss in Chapter Two best exemplifies.

I will consider how her architecture reflects China's, and more specifically, Xi'an's new architectural, cultural, and national identity. Chapter One starts with a survey of the history of Xi'an that leads to the city's search for a new identity, representing both its history and modernity, and how Zhang participates in the quest. In Chapter Two, I will argue the aesthetic

³ Zhang Jinqiu, Zhang Jinqiu: The Interview with the Architectural Academician 张锦秋:建筑院士访谈录 (Beijing: China Architecture and Building Press, 2014), 15.

⁴ Rowe and Seng 2002, 179.

⁵ Zhang 2014, 132-133.

value and the political agenda by examining in detail Zhang's two museums in the city: Shaanxi History Museum and Chang'an Tower. For this study, I will outline the architectural essence in the Tang dynasty to illustrate one of her major sources of inspiration. To better appreciate the challenges of such efforts, I will briefly compare Zhang's other museums in Xi'an with those of two other modern Chinese architects—one in Ningbo and the other in Suzhou, specifically, the Ningbo History Museum designed by Wang Shu, the first Chinese Pritzker Prize winner and the Suzhou Museum by celebrated Chinese-American architect I. M. Pei. These comparisons will show different approaches to making buildings to house cultural relics, and in this way, we can view from a broader perspective Zhang's challenges and accomplishments.

Illustrations



Figure 0.1 Tri-Tang Projects. Xi'an, Shaanxi, China. http://nwin.cscec.com/ywly7_8/gcsj78/201307/2796266.html.



Figure 0.2 Tang Paradise. Xi'an, Shaanxi, China. https://www.pinterest.com/pin/54549857359573555/?lp=true.

Chapter 1 The City's History and Projects by Zhang Jinqiu

Xi'an, located in Northwest China, the capital of Shaanxi Province, was designated as one of the nine members of National Central City in 2018, leads in all aspects of the economy, politics, and culture in the country.⁶ The city's history was spectacular. Overlaying approximately the northern part of the ancient metropolis Chang'an, Xi'an has nothing in comparison to its former splendor and will never regain that glory. Best known as the capital of the Tang dynasty, this place (broadly speaking, the metropolitan area of the present-day Xi'an) was the capital of the Western Zhou, Qin, Han, Sui, and Tang dynasty (Figure 1.1). Additionally, a popular tourism advertisement counts it as the capital of 13 dynasties, which has not been confirmed by the historians It is not bombastic to say that it represents most of the ancient civilization of China, from the Paleolithic Age to the eleventh century, and always holds a pivotal position through other periods.

Dreaming in Chang'an

Xi'an's ancient culture is in evidence today, thanks to many excitations that continually draws the attention of scholars and tourists. In 1963, a group of archaeologists excavated a lower jawbone and the following year a skullcap at Lantian County, 43 kilometers east of Xi'an, and named it Lantian Man. According to scientific detection, evidenced a Neolithic culture in the Shaanxi Province, Lantian Man belongs to the *homo erectus* category of the hominid species, who existed in one million years ago, at least 100,000 years before the notable Peking Man.⁷

⁶ National central cities are of great significance to developing the export-oriented economy and promoting international cultural communication. They are expected to be developed into Asian and even global financial, trade and cultural centers. See "国家中心城市(guójiā zhōngxīn chéngshi): National central cities," China Daily, February 2, 2018, http://www.chinadaily.com.cn/a/201802/09/WS5a7ce35fa3106e7dcc13baec.html, accessed December 8, 2019.

⁷ Maurizio Scarpari, *Ancient China: Chinese Civilization From Its Origins to the Tang Dynasty* (New York: Barnes&Noble Inc., 2006), 22.

Thus, Lantian Man is the earliest example of *homo erectus* found in North Asia so far and probably one of the earliest ape-like but upright-walking men.⁸ Human civilization continued developing in this region. 5 kilometers east of Xi'an, the Banpo site is part of the Yangshao Culture during the Neolithic Age, characterized by primitive agriculture and painted pottery, is still a popular tourist site today.⁹ The geography of Xi'an increases its habitability. Surrounded by eight local rivers and guarded by the Qin Mountains on the Guanzhong Plain, Xi'an has a temperate climate; besides, it is easily arable and perfect for self-defense. These comfortable conditions enable the city with a top choice of being capital for the emperors.

It is referred together as *Fenghao*, the two settlements during the Western Zhou Dynasty (1066-770 BCE) located in the south of Xi'an. King Wen of Zhou initially established the capital at *Feng*, shortly after that, King Wu of Zhou moved it to *Hao*, often addressed as Fengjing and Haojing. *Jing* means the capital in Chinese; for instance, Beijing indicates the capital in the north. Literature dated back to this time, including two of the five texts from the Five Classics, the Book of Documents (*Shujing*), and the Book of Songs (*Shijing*). Their wisdom spreads worldwide with a tremendous influence that epitomizes the Chinese philosophy, that further impacts Chinese architects, including Zhang Jinqiu.

Western Zhou was the peaceful half of the Zhou Dynasty, historians have further divided the chaotic half—Eastern Zhou, into two periods: the Spring and Autumn Period (771-476 BCE) and the Warring States Period (477-221BCE). One could tell from the names of how easily-changeable and dangerous this time was. Until 221 BC, Zheng, the King of the State of Qin, conquered over the other six major states, achieved political unification in Chinese territory,

⁸ Zou Zongxu, The Land Within the Passes: A History of Xi'an, trans. Susan Whitfied (London: Viking, 1991), 40.

⁹ Zou 1991, 41.

¹⁰ Scarpari 2006, 37.

and became the first emperor of the Qin dynasty, known as Qin Shi Huang. The former capital Xianyang still exists as a prefecture-level city 45 kilometers west of present-day Xi'an.

Integrated sections from Xianyang and Xi'an, the central administration has established a national-level district—Xixian New Area, privileged with policy benefits to accelerate the economic development of itself and around.

The jurisdiction aligns with Xi'an. Back in the past, Xianyang has raised Qin Shi Huang yet buried him as well. The tyrant died eleven years after establishing the Qin dynasty, and the empire collapsed three years later. Qin Shi Huang commissioned his mausoleum in 246 BCE at his enthronement to be the King of State of Qin. The construction took 38 years and was finished two years posthumously. The tomb keeps unexcavated, while a local farmer found terracotta parts of the warriors from its extensive necropolis in 1974 for the first time, soon recognized as one of the most remarkable discoveries in the archeology of the twentieth century, the Terracotta Army, which is a major tourist attraction today.

Emperor Gao Zu relocated the capital in Chang'an after founding the Han dynasty in 206 BCE. The city finally has its debut in the name of Chang'an, which means Perpetual Peace.

During the Han, Chang'an was the center for the study of Confucianism and Buddhism, which became the foundation of Chinese culture. The economy of Han was thriving since the Han diplomat Zhang Qian first explored the route from China to the West in history, which led to the opening of the Silk Road. Therefore, Chang'an became a populous trading center in the Augustan Age, ranking alongside with Rome, as the great power in the East.

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¹¹ Shiuh-Shen Chien, "Prefectures and prefecture-level cities: the political economy of administrative restructuring," Jae Ho Chung and Tao-Chiu Lam, ed, *China's Local Administration: Traditions and Changes in the Sub-national Hierarchy* (Oxon: Routledge, 2010), 127-148, 127.

¹² "Xixian New Area," China Daily, May 15, 2019,

http://govt.chinadaily.com.cn/a/201905/15/WS5cdbd6fb498e079e68020f61.html, accessed on December 8, 2019.

The name Chang'an had brought almost 400 years of peace to the Han dynasty, yet it could not escape from a fatal decline. Then the regime altered incessantly. In 581 CE, Emperor Wen founded the Sui dynasty and chose the iconic city as the capital, renamed it Daxing, meaning the Great Flourishing. Nevertheless, Sui was a short-lived dynasty that only survived for 37 years. It left a well-structured capital for its successor, the Tang dynasty. Thanks to the intelligence of Sui architect Yuwen Kai, who abandoned the decayed structure of Han Chang'an, built 800 years ago, and redesigned Daxing in harmony with the natural geographical conditions. Situating the palace-city on top of the Longshou Plateau, the northernmost and highest location both demonstrates its hegemony and secures the safety of the imperial residences.¹³

The architect organized the rest of the city in accordance with the palace-city. Counted from the innermost, the second layer of Chang'an is the imperial-city, where all the administrative and ceremonial activities would take place. Guarded with walls built during the Tang Dynasty, the two inner cities hosted the power center of Tang, from which they oversee the lower sections. Separated by geography and hierarchy, the lower area constituted the last layer of the city, the outer-city, where the ordinary lives.

The entire Sui-Tang Chang'an was symmetrical, centered by the palace-and imperial-cities (Figure 1.2). Breaking through the outer-city from the Mingde Gate, the north-south Vermilion Bird Avenue connected the mundane and the imperial, ended at the south-central gate of the imperial-city, named Vermilion Bird Gate. As one of the four mythological creatures, the vermilion bird symbolizes the direction of the south, according to the

¹³ Nancy Shatzman Steinhardt, *Chinese Architecture* (Princeton and Oxford: Princeton University Press, 2019), 104.

Taoist Five Elements' theory (*Wuxing*). This avenue formulated the axis line, and it links to citizen's everyday life.

Divided into 110 distinct wards by streets and avenues, similar to blocks in the modern city, the Tang wards each had local governors and walls of rammed earth to provide internal security.¹⁴ Much of this city remains in use today. Varied in size and differed in function, the wards tended to be smaller for those next to the Vermilion Bird Avenue and increased as they expanded outwards. The two primary functions of wards are residential and commercial. Aligned by the central axis, the West and East Markets doubled in size, occupying over 466 acres each, and welcomed a significant number of local and foreign merchants to trade. 15 The elite preferred living on the eastern side of the city for the fortune of *Fengshui* (geomancy). Thus, expansive and exotic goods were popular in the eastern market. The West and East Markets promoted economic growth in the Tang Dynasty, despite the limitations of the exchanging areas and hours. Only the two markets possess the central government's permission to host commercial trade that opens from noon at 300 beats of a drum and close at three quarters before dusk on a gong. 16 The city continues bustling at night within residential wards, although Chang'an has a strict night curfew, and the throne banned the night markets in 841. The prosperity of the economy in the wards demonstrates that the capital was not just an imperial city; international denizens belonged to and prospered the vivid city.

Chang'an during the Tang Dynasty was one of the most cosmopolitan cities in Chinese history. The architecture evidenced that there were not only Buddhist monasteries, but also

¹⁴ Charles Benn, *China's Golden Age* (Oxford; Oxford Press, 2004), 51.

¹⁵ Victor Cunrui Xiong, *Sui-Tang Chang'an: A Study in the Urban History of Medieval China* (Ann Arbor: The University of Michigan, 2000), 165-166.

¹⁶ Xiong 2000, 184.

Taoist temples, mosques, and Nestorian churches. Through the Silk Road, the city enjoyed the fusion of foreign culture, religion, and art. The Tang Empire connected with Euroasian countries in all aspects. Meanwhile, the famed Buddhist monk Xuanzang went on his pilgrimage to India, searching for Buddhist scriptures. Neighboring countries also dispatched embassies to the imperial court. In particular, Japan sent their "envoys to the Tang" intermittently between 618 to 839.¹⁷ Abe Nakamaro was one of the most distinguished envoys, who stayed in Tang after his first visit in 717, then served as a Tang governor over decades. Abe was a waka poet in Japan, and he expertized in Chinese language and culture after moved to China. Chao Heng, Abe's Chinese name, became friends with a majority of Chinese literati in Chang'an, including the two great poets Li Bai and Wang Wei, whom both wrote poems in memory of him, an ambassador, scholar, and poet.

The Sui-Tang Chang'an became the standard for medieval Chinese cities and the prototype of Heiankyo for Japan (the present-day Nara). After the fall of the Tang in 907, the city was never a capital again, nor ever named Chang'an again. Nevertheless, its magnificence remained in its architecture, literature, and art. In 1421, Yongle Emperor from the Ming dynasty moved the capital from Nanjing to Beijing, and renamed Chang'an as Xi'an, meaning Western Peace. Since then, Xi'an has played an essential role in modern and contemporary China. Notwithstanding, Chang'an became immortal among people's memory and started its romance.

Working in Xi'an

China suffered under western imperialism in the declining years of its last dynasty, the Qing (1644-1911). The modern era began with the establishment of the People's Republic of

¹⁷ Robert Borgen, "The Japanese Mission to China, 801-806," *Monumenta Nipponica*, no. 1 (1982): 1.

China in 1949, ending years of hardship, but the communist regime soon encountered problems and went through several devastating events, culminating in the Cultural Revolution which was characterized by chaos, and massive destruction of the monuments of the past, closing the colleges and more. With the end of that era in 1976, and the death of Mao, a new regime was ushered in which had open relations with the west and embraced a form of capitalism. The country needed to modernize and construct buildings for the new Chinese regime. Xi'an was not an exception. Zhang Jinqiu, the architect whose works are ubiquitous in Xi'an in all forms, including modern monuments, museums, and commercial buildings. In 1966, Zhang moved to Xi'an and joined the China Northwest Architecture Design and Research Institute after her graduation at Tsinghua University. Xi'an, located in the wild Northwest, was under an urgent need for specialists to do urban planning and construct new architecture. Zhang could have never known that she would devote herself to the reconstruction of this city. As a student of Liang Sicheng, the most acknowledged architect and architectural historian in modern China, Zhang learned beyond traditional forms of architectural knowledge, and Liang's passion and patriotism in fostering modern architecture in China. Besides, Zhang also inherited the master's attitude of being an architect. She always remembered a quote from Liang's writing Zhuo Jiang Sui Bi (A Normal Craftsman's Essay) that "an architect should not regard yourself as an almighty creator, but a craftsman who builds houses for the people, and ensures them live well." Zhang agrees by stating that she aims not to become an artist but a worker who serves people. Thus, "form follows function" is also true to Zhang.

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¹⁸ Zhang 2014, 39.

Indeed, Liang has a huge impact on Zhang; she decided to join the other research at that time in Tsinghua University about the Summer Palace led by Mo Zongjiang, instead of working for Liang about the architectural manuals of the Song dynasty. Zhang's curiosity and study about the imperial garden and layout continued and facilitated her career's work with imperial Tang architecture in Xi'an. Mo, another pioneer in modern Chinese architecture, was Liang's student and assistant. Expert in the Chinese garden, Mo perceived its beauty comprehensively. Recalled by Zhang, Mo once exemplified the diversity of traditional gardens and the universality of architecture in class, using a black and white picture of stacked stones in front of a plain wall from the Suzhou gardens, explained its simplicity and modernity mixed within a quaint sense of the Chinese environment.¹⁹ This theory has an enduring influence on Zhang's design.

Studying at Tsinghua University prepared Zhang with sufficient knowledge in architecture and abundant patriotic sentiment. Unlike her mentor, Liang Sicheng, who graduated from the University of Pennsylvania and lived in Japan and the United States for a long time, Zhang was trained in Chinese institutions only. In 1980, when she was 44, she had to make a compromise between her project Shaanxi Stadium and her last opportunity to study abroad. Her age then exceeded the limitation in applying for a government-sponsored program.²⁰ However, after the year 2000, the architect visited ancient monuments and attended conferences overseas quite frequently, as she gained more reputation with her unique style of architecture in Xi'an. Some Chinese scholars refer to it as the New-Tang style, in which Zhang adopts traditional Chinese components merging them into modern aesthetics.²¹

¹⁹ Zhang 2014, 40

²⁰ Zhang 2014, 125.

²¹ Zhang 2014, 76-77.

According to Zhang's interview, the architect revealed her enthusiasm and talent in art and literature, about how she enjoyed reading, and how she actively participated in artsy activities at middle school, decorating chalkboards in the classroom. Zhang spent her teenage years in Shanghai. The younger Zhang encountered the social upheaval and the latest reforms in the city. She applied for art schools and thought about majoring in literature, yet listened to her father's advice. Zhang went to a regular school and studied architecture. Coming from an intellectual family, Zhang's mother, uncle, and aunt were all architects, while her father was an engineer, he hoped Zhang to be an architect as her older brother who majored in Shipbuilding, saying that "one makes houses on the sea and one in the land." Although Zhang grew up during the most turbulent years of modern China, experienced the Cultural Revolution, she was fortunate enough to stay with her family that supported her to pursue education.

Furthermore, Zhang's fascinations in art and literature advanced her in studying architecture. She is good at sketching, and she incorporates literary ideas in her design process. Aside from working as a craftsman, Zhang also believes that an architect must think like a writer who composes an organized structure and situates the characters in the proper sections. This delicate sensation exists in Zhang's works and becomes her signature.

Zhang's character is clearly expressed in her first renowned project, the monument of Abe Nakamaro finished in 1979 (Figure 1.3). Located in the Xingqing Park, the former imperial Xingqing Palace in Tang dynasty, the Shaanxi government commissioned this task to commemorate the ambassadors from the Japanese missions to Imperial China, from which Abe was the most known one. The medieval envoy contributed in spreading Chinese culture in Japan

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²² Zhang 2014, 31.

and advocating the connection between China and Japan. This simple design being minimal and traditional announced the character of Zhang. Rather than casting a bronze bust of the person, Zhang situated a white marble pillar with a carved base in the center and capped with a small pavilion-like shrine with a spire on top. The pillar is 5 meters tall, engraved on four sides with the monument's title, Abe's biography, a piece of Li Bai's poem, and a piece he wrote back to Li. The poetic context introduced his background; additionally, it might reflect on the architect's interest in literature as well.

Looking at the monument, elevated three steps above the ground, surrounded by four benches, Zhang managed a respectful arrangement while inviting visitors to sit down and read about the adventurer's extraordinary life. This project earned reputation for the architect. Since then, Zhang has participated in many public projects, including the Shaanxi Stadium, the Bell and Drum Tower Square, and the Tang Paradise. Additionally, the famous Kaiyuan Department Store and Tanghua Hotel are also her works. Zhang has designed most of the museums in Xi'an and within Shaanxi Province, for example, Shaanxi Province Art Museum, Xi'an Museum, and Danfeng Gate Heritage Museum. Notwithstanding, the Shaanxi History Museum remains the most special one in her career.

Illustrations

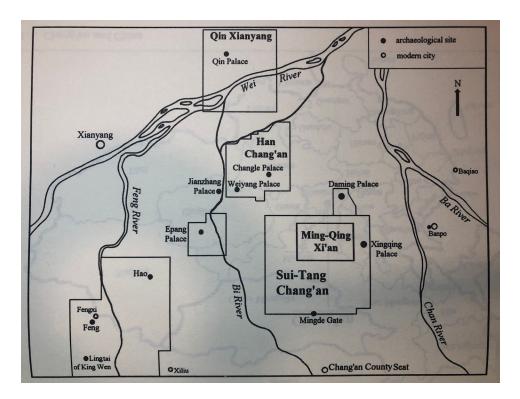


Figure 1.1 Victor Cunrui Xiong, Archaeological sites in the metropolitan Xi'an area. Victor Cunrui Xiong. *Sui-Tang Chang'an: A Study in the Urban History of Medieval China*. Ann Arbor: The University of Michigan, 2000.

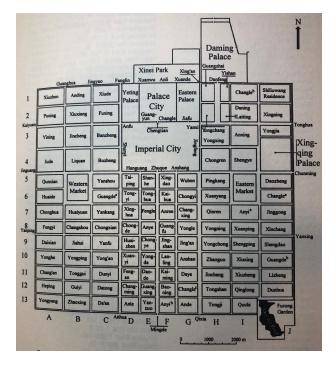


Figure 1.2 Victor Cunrui Xiong, Plan of Sui-Tang Chang'an.
Scale not given. Victor Cunrui Xiong. Sui-Tang Chang'an: A Study in the Urban History of Medieval China. Ann Arbor: The University of Michigan, 2000.



Figure 1.3 Zhang Jinqiu, The monument of Abe Nakamaro, Xi'an, Shaanxi, China, 2016.

Chapter 2 Zhang's Museum Works in Xi'an: The Architectural, Cultural, and National Construction

Different types of architecture make various kinds of statements related to their function, style, and physical context. Museums, as treasure houses, provoke the human mind, with their designs, collections, and exhibitions. In this modern era, China is experiencing great prosperity, and an interesting reappearance of culture has led to building hundreds of museums. Xi'an, cradle to the ancient culture of China for years, has many museums celebrating its history. Among them, the architect Zhang Jinqiu created the majority. Here I will briefly describe two of the most outstanding: Shaanxi History Museum and Chang'an Tower, which demonstrate the architect's unique method of approaching the challenge of making homes to China's magnificent heritage and celebrating the new cultural identity of the city. To better understand the particularity of Zhang's designs, I will introduce two types of Tang architecture that impacted Zhang's design: the palace and pagoda, exemplified by the archetypical Tang monuments, Nanchan Monastery, Foguang Monastery, and the Giant Wild Goose Pagoda. In addition to her two remarkable museums, I will present three other museum works that characterize Zhang's signatures and theories. In this chapter, I explore the relationship between architecture and culture in contemporary China and how Zhang mingles these features in her works.

The Big Roof and a Combined Style

In the early 1950s, associated with the urge to build a new national identity, the question of constructing an architectural style in the People's Republic of China received much attention from all sectors of society. Specialists from the Soviet Union helped with the construction and dominated China's architectural planning. They further proposed the necessity of national

architectural identity, referring to the form of the watchtower they saw in Beijing at the time (Figure 2.1).²³ The big roof decorated with an intricate bracket set fascinated them. Similarly, as Liang Sicheng showed, many western architects put the roofing details on top of modern buildings since the beginning of the twentieth century, and the outcome was barely satisfactory, for example, Peking Union Medical College Hospital (Figure 2.2) that opened in 1921. At this time, "The Big Roof Controversy" was a hot topic.²⁴ In the end, Liang altered his initial opposition toward this issue of building a national form presumably for an academic reason.²⁵ The scholar struggled dramatically with governmental and academic critiques in the fast-changing political and social situations.²⁶ Despite all the turmoil of finding a proper architectural language in the early twentieth century, the "big roof style" has been inherited by the next generations. During the Republican period before the controversy, Liang participated as a consultant in the design competition of the former National Central Museum (Figure 2.3), nowadays Nanjing Museum. Finished in 1948, the museum fully adopted an imperial Chinese palace format, following the Liao and early Song dynasties format, yet Liang evaluated it as "a

²³ Hu Zhigang 胡志刚, "Study on Liang Sicheng's Academic Practice (1928—1955) 梁思成学术 实践研究 (1928—1955)," PhD diss., Nankai University 南开大学, 2014, 251-252.

²⁴ Nancy Shatzman Steinhardt, "The Tang Architectural Icon and the Politics of Chinese Architectural History." *Art Bulletin* 86, no. 2 (June 2004): 288-254.

²⁵ Liang disagreed with the "big roof style" for two reasons. One, it was an imitation, not a creation. Without considering the difference between structures, it distorted the grace of Chinese architecture and neglected the advantages of modern architecture. Liang metaphorically compared the building with a big roof to a man wearing a Western suit and a Qing official's cap with his queue. Two, the extravagant funding this imitator of classic architecture needed exceeded China's economic capacity. Nevertheless, since the 1950s, he started realizing that his critique of the "big roof style" was based on the unsatisfactory quality of the design. It might be possible for Chinese architects to find an organic way of practicing the national architectural identity that balances the traditional and modern well.

²⁶ During the early times of the People's Republic of China, the political and social conditions changed swiftly. It is too complex to summarize the reasons that Liang suffered from the critiques. However, one direct link was that in 1955, China started to criticize the revivalism and impracticality because the Soviet architecture world abandoned their former attitude after their regime change. Liang, as a pioneering scholar and practitioner, became the target in this political reformation. See Hu Zhigang, *Study on Liang Sicheng's Academic Practice (1928—1955)*, 242-248.

significant example of modern Chinese architecture."²⁷ Almost half a century later, Shaanxi History Museum (Figure 2.4) opened in 1991, Xi'an, as the first modern museum established in the People's Republic of China, commissioned by Premier Zhou Enlai. Designed by Liang's student, Zhang Jinqiu, in her early career, this museum is an updated version of the Nanjing Museum. Like those western architects, Zhang combined traditional Chinese architectural modules within a modern system, borrowed elements from ancient architecture.

To decipher Tang architecture's influence on the Shaanxi History Museum, an introduction about the Tang wooden palatial building and its peculiarities are necessary. The oldest Tang wooden palatial building surviving in today's China is the Main Hall of Nanchan Monastery, in Wutai, Shanxi, which dates in 782 (Figure 2.5). Small and modest, this Buddhist hall is three bays (a bay is an area between two columns on the facade of the building) across and three bays in-depth, measuring 11.75 meters across the front, and 10 meters deep.²⁸ It is a hip-gable roof, which is the ancestor of the fashioned "big roof" in Republican China. Under the roof is the bracket set in the form of *five-puzuo* (*puzuo* being a Song-dynasty term for bracket set or *dougong*) and can reach as many as eight."²⁹ The ranking system remains significant in traditional Chinese architecture, as a continuation of the court rank, which corresponds with feudalism in Imperial China; determine not only by the form of a bracket set but also the bays of the hall. For example, the East Hall of Foguang Monastery (Figure 2.6), 45 kilometers away

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²⁷ Lai Delin, "Idealizing a Chinese Style: Rethinking Early Writings on Chinese Architecture and the Design of the National Central Museum in Nanjing." *Journal of the Society of Architectural Historians* 73, no. 1 (March 2014): 74. Liang classified it as a modern architecture, because it was built in a contemporary time as a fully-functional modern museum. Therefore, mixing with a Chinese architectural style would not make it classic, on the contrary, adopting a modern structure would not make it modern.

²⁸ Steinhardt 2019, 111.

²⁹The term *puzuo* was brought up by a Song architect Li Jie, who wrote *Yingzao fashi (Manual of Architecture)* that defined and standardized the terms and rules in architectural construction. See Steinhardt 2019, 111, 151.

from the Nanchan Monastery, is seven-by-four bays, five central front bays, and two smaller outer ones measured 34 by 17.66 meters. Differed in size, the East Hall of Foguang Monastery represents diantang, an eminent hall, and the smaller former one as tingtang, a less eminent hall. ³⁰ The bays are odd numbers only, ranging from one to eleven. The Hall of Supreme Harmony in the Forbidden City (*Taihe Dian*) with eleven bays, is the largest *diantang* remaining in today's China (Figure 2.7). Numbers are vital in Chinese architectural design, signifying dynamism and supremacy. Imperial architecture is often supported on a triple base approached by odd numbers of stairs. According to the dualism of vin and vang, odd number relates to the power of yang, that in this case, emphasizes the patriarchy of the emperor.³¹ Elevated and centered, the main hall is flanked by four towers in the corners marking the four directions. The Chinese people have given different meanings to specific numbers. For example, it is common that three, six, and nine constitute a progressing that symbolizes the continuity and longevity. Thus, the construction of staircases usually follow this discipline. In contrast to the positive implications, the number four is usually a taboo as its pronunciation sounds like the word "death" in Chinese, it is better to avoid when naming a building.

As Liang asserted, the proportions of Chinese architecture differs from the Western. Speaking for the palatial architecture, the East Hall of Foguang Monastery has an enormous *dougong* of four tiers of cantilevers—two tiers of bracket-arms (*huagong*) and two tiers of the beams (*ang*).³² It undertakes a complex seven-*puzuo* formation, ranking only second to the eight-*puzuo*. The bracket set is an assemblage of a number of blocks (*dou*) and arms (*gong*)

³⁰ Steinhardt 2019, 112-113, 150.

³¹ Donia Zhang, "Cultural Symbols in Chinese Architecture," Architecture and Design Review, vol. 1 (2018): 1-19.

³² Ssu-ch'eng, Liang. A Pictorial History of Chinese Architecture (Cambridge: The MIT Press, 1985), 43

adopted to transfer the load from the horizontal to the vertical side.³³ Unlike the heaviness of the stone-based Western architecture, the Tang architecture has exceptional stability and flexibility and allows room for any transformations, assuring the safety of the building. *Dougong* distributes weight efficiently, connects the roof and column tightly, and maintains the balance of the whole framework. Thus, the bracket set plays a decisive role in constructing Tang timber structures. From the Tang to the early Song dynasty, the ratio of a full length of the bracket set to the column beneath is approximately one to two, illustrated by the East Hall of Nanchan Monastery, measuring 2.5 to 5 meters.³⁴ With the evolution of brick and stone architecture from the Late Tang Period, the frame's firmness has been enhanced, which decreased the practical demand for the *dougong*. By the Ming Dynasty, it has become a decorative essential.

Besides the bracket set, another peculiarity of Tang and traditional Chinese architecture is the curved roof. The two monastic halls in Shanxi both have the hip-gable roof, also the most common one. According to Liang, there are five essential types: overhanging gable roof, flush gable roof, hip and gable roof, hip roof, and pyramidal roof (Figure 2.8). Besides, the roof decoration implies the imperial hierarchy. Numbers of animals are aligned along the roof ridge from zero to ten maximally. Some of the creatures are iconographies of natural elements and some are sons of dragon associated with water in Chinese mythology. They protect the palace from fire and are auspicious signs. *Chiwei*, the creature at the apex, translated literally as the owl's tail relates to its character in myth as a fire-eater and climb lover.³⁵

After viewing through the Tang palatial buildings, the Shaanxi History Museum becomes nostalgically familiar. In 1973, Premier Zhou indicated its site selection to be adjacent

³³ Liang 1985, 15.

³⁴ Steinhardt 2019, 113.

³⁵ Liang 1985, 11, 16.

to the Tang architecture compound southern in Xi'an. ³⁶ Designed by Zhang Jinqiu early in her career, the architect situated the museum in between the Giant Wild Goose Pagoda complex and the Da Xing Shan Temple. Occupying over 56,000 square meters, this museum has a vast rectangular pond in front of the main entrance, surrounded by four corner pavilions and gates in each direction, an exhibition hall in the center, and an office building behind. The museum applies the grand style and the particular form of the imperial palace completely, liberating the feudal architectural method. While remaining the sense of Tang, Zhang also transformed some contents purposefully to meet the functional needs and modern aesthetic norm. The Main Hall of the Shaanxi History Museum embodies Zhang's concept preeminently. Built on a three-tiered marble stair, it is nine bays in length (except two shrunken end bays) and five bays across, doubled columns and doubled eaves echoed the measurement of the top-ranking imperial palace in Chinese architecture. Roofed by the hip-gable formula, the exhibition hall does not host all nine animals but only the *chiwei*, which has been modified from the Tang version. The design of chiwei at the Nanchan Monastery, silhouetting a profile of a protruding pointed animal tail with either its fin or hair above, depicted linear details and a dotted body figuratively. Whereas, the one on top of the museum shows an abstract image blended all these parts, only keeps the curving format with a sharp angle and the same details of the lines and dots (Figure 2.9). Viewing downward from the *chiwei*, the museum has a slender body. Proportionally, the ratio of the bracket set and the column has increased to one to three. Zhang simplified the dougong, deleted the straight beams, and elongated the columns. By using steel and reinforced concrete, the frame no longer needed a large bracket set for weight balancing or multiple beams for

³⁶ Wei Quanrui 魏全瑞, ed., *Shaanxi History Museum 陕西历史博物馆* (Shaanxi: San Qin Chu Ban She, 2003), 1-7.

supporting. The existing *dougong* works as a reminiscence, symbolizing its significance in the past, and representing the lineage of Chinese architecture.

As mentioned above, the Shaanxi History Museum's change in material and other aspects of design signify the desire for modernization. Zhang abandoned using the traditional timber structure and embraced new industrial ingredients. The grey sandstone columns match with the beige bracket set and beams exposed outside, tried to simulate a perception of art brut and modernism. Most strikingly, like modern skyscrapers, the exhibition hall has an enormous glass curtain wall. Each bay contains two layers conjoined by brass and three-piece per layer that invites the visitors and nature to come in. However, its dark brown color prevents the sunlight from the outside, secures the collections, and keeps Shaanxi's history a mystery for the audience to discover.

The modernity of the museum originates from its material and color. Unlike the Nanjing Museum that employed a traditional color scheme with a yellow roof and red column, linking closer to the Ming and Qing style, Zhang limited her primary palette to black and white and played with the grey level. In between the lower portion of the glass wall, the architect adorned a thin red belt engraved with the museum's title in Chinese and English, extending across the whole facade (Figure 2.10). This elaborate detail not only highlights the building itself through a bright color but also emphasizes the museum's name vibrantly and modestly. In contrast to the Nanjing Museum, displaying its title on a traditional inscribed board hanging in the center of the main hall, Zhang manifested an organic way of combining Chinese culture with modern architectural theory through this simple but significant touch.

Once inside the exhibition hall, one enters into a narrower space one feels and is welcomed by a stone lion on a slightly elevated pedestal solely in the center (Figure 2.11). Dated in 690 under the reign of empress Wu Zetian, this sculpture, excavated from her mother's mausoleum as a guardian creature, is the largest one in Chinese archeological history. Albeit the museum wants to express the greatness of the Tang dynasty, said in its label, it takes up a considerable amount of space. Moreover, the interior accommodates another row of stone columns, each accompanied by a round bench for visitors' convenience. Aside from the pillars, there are the information desk and the visitor's center next to the entrance and hallways to other exhibition rooms. The redundant design causes the crowding of the main hall on holidays.

Spatially, the palatial structure restricts this architecture efficiency as a functional museum building. As the embodiment of power, imperial palaces occupy vast lands distributing wealth and sovereignty. On the contrary, as a modern museum located in the heart of the city, Zhang envisioned a relaxing and educational place for the audience, whereas the garden layout cannot afford the pressure of the increasing popularity. Nevertheless, the symmetry of the museum offers some satisfaction. It follows the geomantic principles and integrates multiple functions of exhibition, conservation, storage, and commerce in a single museum, which was a difficult challenge for Zhang and her colleagues, especially in such a period and in this historic city. Constructed during the first decade after China issued the Open Door Policy as a vital part of the Economic Reform, no one had a successful experience in building modern museums incorporating Chinese architecture. Zhang opened a new chapter for modern Chinese architecture to some extent, while the architect further developed her architectural language based on this project. Nevertheless, the back view of the museum resembles the Peking Union Medical

College Hospital incredibly (Figure 2.12). Combining the imperial and the utilitarian is a less brilliant idea, rather than combining the modern and the traditional. The back's big hip-gable roof plus the multitude of slider windows generate a weird alien look.

According to an announcement in July 2019, the Shaanxi History Museum will have a new building at the Horticultural Expo Park north in Xi'an.³⁷ The space limitation and the overwhelming size of the collection limit the museum's exhibition planning and storage. It welcomes 12,000 tourists daily and houses 1,710,000 pieces of relics from the Neolithic Period to the Qing dynasty. These numbers seriously exceed the museum's capacity. Hopefully, the new building will ease the space limitation of the old one and present an innovative appearance that better combines the traditional and modern style.

The Icon Project and Xi'an's New Landmark

Chang'an Tower, also designed by Zhang Jinqiu overlooking the whole city on the bank side of the Ba River, stands in the suburbs away from downtown Xi'an, but closer to the former imperial palace of Tang Chang'an (Figure 2.13). This location is near to the new extension of the Shaanxi History Museum, located in the International Horticultural Expo Park, in the Chanba Ecological District, established in 2004; this district is becoming a new cultural center. The tower measures 95 meters in height, covered an area of over 13,000 square meters and was built on the highest position in the Expo Park. It is one of the park's four most popular and iconic sites. Not coincidentally, the authority selected this neighborhood for cultural and historical related projects, for its well-known scenic view. The district possesses a natural advantage of the

³⁷ "Shaanxi History Museum Announced the Construction for A New Extension inside the Expo Park in the Chanba District 陕历博要建新馆 新址定在浐灞世博园内," People's Daily Online, July 30, 2019, http://sn.people.com.cn/GB/n2/2019/0730/c378288-33192475.html, accessed December 8, 2019.

³⁸ Zhang Jinqiu 张锦秋 and Xu Rong 徐嵘, "Notes on the Creation of Chang'an Tower 长安塔创作札记," *Architectural Journal 建筑学报*, (August 2011): 2.

ancient Chan and Ba Rivers that, together with six more rivers surrounded ancient Chang'an, became well-known as early as the Western Han dynasty. Therefore, the Chanba Ecological District primarily concentrates on exploring a novel eco-friendly way of urban development. 40

The 2011 Horticultural Expo is one of the earliest projects launched in this district, in which the Chang'an Tower counts as the most iconic one, in the sense of Leslie Sklair who defines an "Icon Project," functioning as a weapon that contributes to create and solidify the authority. Sklair claims that in most countries, the officials recruit prominent architects to build an iconic architecture that connotes the newest policies, to shape the formation, expression, and marketing of the city that eventually formulates a national identity. In China, chiefly, cities compete against each other for icons and hire international architects to add something different on their pathway to become a global city, as if architectural icons can symbolize contemporary China's arrival onto the world stage. Xi'an, undeniably, is one of those cities. There are additional regulations that architects need to consider in consonance with its history and monuments that still exist, for instance, the height limitation. Buildings around the Giant Wild Goose Pagoda reaches from 6 meters to 60 meters, depending on their distance to the 64 meters tall pagoda, the closer they are, the lower the architecture can build, which is a prevalent rule in

³⁹ A poem by the litteratur Sima Xiangru from the Western Han dynasty first described the beauty of the eight rivers around Chang'an, saying that "君未覩夫巨麗也,獨不聞天子之上林乎?左蒼梧,右西極,丹水更其南,紫淵徑其北。終始灞滻,出入涇渭;酆鎬潦潏,紆餘委蛇,經營乎其內。蕩蕩乎八川分流,相背而異態,東西南北,馳鶩往來." See Sima Xiangru 司馬相如, ed., Jin Guoyong 金國永, Si Ma Xiang Ru Ji Jiao Zhu 司馬相如集校注 (Shanghai: Shanghai guji chubanshe, 1993), 32.

⁴⁰ "Introduction to Chan-Ba Ecological District," China Daily, March 3, 2011, http://www.chinadaily.com.cn/m/expo2011/2011-03/03/content 12246248.htm, accessed December 8, 2019.

⁴¹ Leslie Sklair, *The Icon Project* (Oxford: Oxford University Press, 2017), 3.

⁴² Sklair 2017, 153-154.

⁴³ Sklair 2017, 151, 191.

Xi'an wherever there are ancient monuments.⁴⁴ Thus, the Chang'an Tower, built north of the old city, echoes the Giant Wild Goose Pagoda standing in the south, stylistically and geographically; it also shaped Zhang's design.

Having undergone many reconstructions and turbulent history, the Giant Wild Goose Pagoda, first erected by Tang Gaozong in 652 was a consecration place built for the Buddhist master Xuan Zang, who also participated in planning. It was soon destroyed by war. The existing structure is based on Empress Wu Zetian's building between 701 to 704 and the reconstruction made in the seventeenth century. As Xuan Zang related the architecture to an Indian stupa manner made of stone, in honor of Buddhism's origin after his pilgrimage to India. However, the emperor substituted the exotic stupa with a five-story brick pagoda, probably following the appearance of the vernacular Da Ci'en Temple, where it raises. During its renovation at the beginning of the eighth century, the pagoda reached its present seven stories and 64 meters high.

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The structural evolution of the Giant Wild Goose Pagoda exemplifies the development of pagoda architecture during the Tang dynasty, which affected later buildings. Classified by the architectural historian Liang, Chinese pagoda has four principal types: one-storied, multi-storied, multi-eaved, and stupa. The original dome-like structure of the Indian stupa was integrated with

⁴⁴ "Architecture in the Neighborhood of the Giant Wild Goose Pagoda Must Not Exceed 60 Meters High 西安大雁 塔周边建筑不超60米," China News, October 2013, http://www.chinanews.com/house/2013/10-12/5371133.shtml, accessed December 8, 2019.

⁴⁵ Li Baijin 李百进, *Tang Feng Jian Zhu Ying Zao 唐风建筑营造* (Beijing: China Architecture and Building Press, 2007), 141.

⁴⁶ Laurence Sickman and Alexander Soper, *The Art and Architecture of China* (London: Penguin Books, 1971), 406-407.

⁴⁷ Sickman and Soper 1971, 407.

⁴⁸ Steinhardt 2019, 116.

the Chinese architectural vocabulary, seen for example, in the palatial building type, the early pagoda was an indigenous multi-storied tower with a square plan, made of timber and surmounted by a stupa. The builders recognized the benefits of brick and stone for monuments like this. Hence, the masonry pagoda made its debut and outlasted its wooden prototypes (Figure 2.14). The only surviving wooden pagoda in China is the Sakyamuni Pagoda of Fogong Temple in Ying County, Shanxi (Figure 2.15).

As the most iconic Tang pagoda, the Giant Wild Goose Pagoda features almost all the characteristics of this kind of architecture and demonstrates its dominant usage. It is a typical three-part structure, having a square base, diminishing courses from bottom to top, and a spire. Usually, a pagoda building would also include a reliquary crypt (*digong*). Looking upward, Chang'an Tower has corbelled eaves that imitate the bracket sets on the wooden pagodas in contrast. In this case, the eaves exceed the exterior silhouette, which balanced with the narrow tapering body more competently. On the pagoda, the numbers of bays on the facade decrease, as the tower rises from the lowest to the highest story, ranking from nine bays to five bays, where centered an arched door facing each side. The lowest lintel has engravings depicting a Tang timbered hall. Coated with mud, the Giant Wild Goose Pagoda shows an earthy color. Chinese pagodas are rarely painted and they expose the material's original color. Inside of the pagoda is a hollow shell with timber floors and stairways. The monk Xuan Zang preserved the Buddhist scriptures preached here. A pagoda often marks the site of a Buddhist relic or a monk's tomb. Standard of the pagoda often marks the site of a Buddhist relic or a monk's tomb.

Originated from India as religious architecture, the pagoda has been shaped magnificently and endowed with Chinese blood. Liang and other scholars regarded it as "a happy combination"

⁴⁹ Liang 1985, 124.

⁵⁰ Steinhardt 2019, 116.

⁵¹ Liang 1985, 124.

of the foreign and local architectural styles.⁵² Liu Dunzhen, also an influential figure in modern Chinese architecture, accredited the pagoda buildings that, from pure replication to creation, their contribution to building national architecture and culture is outstanding.⁵³

Not to mention that Chinese pagoda has a huge impact even today. The architect Zhang Jingiu referred to it in her design of the Chang'an Tower. Completed in 2011, the tower is fourteen-storied with one basement and six invisible stories. Counting from the exterior, it presents only seven floors, equal to the number of stories that the Giant Wild Goose Pagoda, the 4.6 meters overhanging eaves conceal the others, which has become a common technique in the past. Notably, the Chang'an Tower displays uniquely various quantities of traditional architectural details of pagodas. First of all, its entire body tends to be more square than narrow, which linked to the initial design of the Chinse towers that did not diminish, regularly raised from the square ground. 54 More surprisingly, Zhang hung wind chimes on the four directions of every level, that was dismissed on the Goose Pagoda but frequently shows up in old pagodas, preventing birds and transmitting meditating melodies. The extensive use of Chinese symbols emphasizes Zhang's intention of awakening the audience to notice and appreciate the delicacy of traditional architecture. Meanwhile, architects, function as the ambassadors of the government, as a part of their job reports the new policy relating to architecture. Zhang acknowledged the renaissance of the city's history by plainly laying down architectural details. It is necessary to study further her response of making the tower a modern and green building then determine

⁵² Liang 1985, 124.

⁵³ Liu Dunzhen 刘敦桢, *Liu Dun Zhen Quan Ji 刘敦桢全集* (Beijing: China Architecture and Building Press, 2007), 129.

⁵⁴ For example, the clay watchtower model (Figure 2.16) in the Han dynasty (206 BC-220AD), Liang supposed it of the predecessor of the early Buddhist pagoda. See Liang 1985, 27; and the Four Gates Pagoda (Figure 2.17), a single-storied pagoda built in the Sui dynasty (581-618).

Zhang's capacity of being the city's representative that composes and builds the icon project that defines a new identity for Xi'an.

In essence, the architect simplified traditional components to indicate their modernism.

For instance, Zhang generalized the fancy Tang balustrade into a utilitarian linear structure, eliminating extra decoration. Similarly, Zhang upgraded the cornices, the Tang's simplification of bracket sets into another level, using the rectangular beams and capital blocks to silhouette a descending tendency that recalls the image of a *dougong*. This alternation in shapes is worth noticing because it reveals the architect's understanding of both Chinese and Western architecture. The repetition of simple elements constitutes the rhythm of architecture and helps establishing the goal of an architecture. Although architects and viewers tend to neglect, it truly expresses the personality of a building. Here, Zhang has noticed it and proposed an energetic rhyme that changed the daunting religious feeling for pagoda architecture.

In a tower-pavilion style, the Chang'an Tower has a veranda on each story and peripheral columns. Unlike the traditional format of inserting the columns in the central body, for example, the Sakyamuni Pagoda in Ying County. Zhang pulled them out to the exterior that left a free plan for the facades made of glass and set another row on the ground level elevating the tower (Figure 2.18), inviting the natural light to come in the building. Unquestionably, the free facade and ground are Zhang's salute to western modernist masters. Moreover, modern material assists the architect's concept. The tower is steel-framed combining with transparent low-iron glass, which shortened the construction time and reduced the weight. It is in metallic grey color, illuminated

⁵⁵ Zhang Jinqiu and Xu Rong, "Chang An Ta Chuang Zuo Zha Ji," Architectural Journal, August 2011, 1-3, 2.

⁵⁶ Zhang and Xu 2011, 2.

⁵⁷ Rena Thapa, "Rhythm in Architecture: An Aesthetic Appeal Rena," *Journal of the Institute of Engineering*, 2017, 13(1): 206-214, 208.

by LED lights that outline the external structure that changes in three color themes at night: golden, purplish-white, and rainbow, which indicates its majesty, sanctity, and modernity (Figure 2,19).

As for the sustainable aspect of the building, the steel construction is easily recyclable. Besides, Zhang exploited the stack effect to create air circulation in the tower, by installing aluminum louvers under the eaves outside the glass facade and opening a skylight under the tented roof. ⁵⁸ Consequently, in the summertime, they close the shutters and open the skylight, and vice versa in the winter. Most strikingly, with the help of painters, Zhang made an extraordinary oil painting of a banyan tree around the core tube on seven of the visible floors, for they wished to create an eternal green space (Figure 2.20). ⁵⁹ It not only represents the ecological balance, but the banyan tree is a principal Buddhist symbol. As a contemporary building, Chang'an Tower no longer serves as a religious venue. However, it connects with the pagoda's original function. Except for the iconic banyan tree, the tower presents Buddhist art exhibitions including figurative sculptures and tangkas so frequently, it is as if it was a permanent collection, is. Historically, pagoda architecture has three basic usages, sacred, geomantic, and sightseeing purposes. 60 Indeed, the Chang'an Tower covers all three traditional perspectives. The color green is another clue evidencing its substantiality. From ceilings, floors, stairs, and restrooms, no one can miss it. Notwithstanding, since half of the stories are highly dependent on natural lighting, this color assimilates with the tree paintings and the interior designs. Nevertheless, instead of looking fresh, it feels dusty, especially at unsatisfying weather.

⁵⁸ Zhang and Xu 2011, 2.

⁵⁹ Zhang and Xu 2011, 1.

⁶⁰ Zhang and Xu 2011, 1.

The maintenance of the tower after the 2011 Expo has been barely pleasurable. In Zhang's design, the visitors are supposed to enjoy the view from the observatory on the top level.

61 Unfortunately, the tower has limited availability. Based on personal experience, currently, the building only opens floor one to seven to the public, and the others have mostly offices for the park. Zhang mentioned in her writing that there could be gift shops inside the tower, but so far, they are missing. Due to the low volume of tourists, the management may think it is not necessary, whereas it excludes commerce from the building, which might potentially engage a greater audience.

Furthermore, both the operation and architectural style of the Chang'an Tower remain problematic. Targeted as an icon project, the authority and architect have been advertising its modernity and traditionality to the public. It is fair to say that the tower is a derivative work. The tower copies the wooden pagoda's structure completely but is constructed by industrial materials. Remembering from half a decade ago, when the "big roof controversy" happened, Liang had warned Chinese architects to avoid simply accommodating the systems of Chinese buildings to Western modes. It is an eclectic approach that shortchanges both. Fifteen years after the Shaanxi History Museum, the technology has improved rapidly, but Zhang's style does not appear as modern as she claims. From my perspective, this project of building a tower that

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⁶¹ Zhang and Xu 2011. 2.

⁶² Joseph Giovannini, "Architectural Imitation: Is it Plagiarism," *New York Times*, March 17, 1983, https://www.nytimes.com/1983/03/17/garden/architectural-imitation-is-it-plagiarism.html, accessed December 8, 2019.

⁶³ Zhao Chen, "Elevation or Facade: A Re-evaluation of Liang Sicheng's Interpretation of Chinese Timber Architecture in the Light of Beaux-Arts Classicism," *Chinese Architecture and The Beaux-Arts*, ed., Jeffery W. Cody, Nancy S. Steinhardt, and Tony Atkin (Honolulu: University of Hawai'i Press, 2011), 200.

⁶⁴ Zhang Jinqiu 张锦秋, From the Tradition to the Future: The Discovery of an Architect 从传统走向未来: 一个建筑师的探索 (Beijing: China Architecture and Building Press, 2016), 285.

represents the history and future of Xi'an had the potential of becoming a true icon in the city. However, the authority and Zhang made a good attempt with an average outcome.

Structurally, pagoda buildings stand as an unparalleled icon by themselves. During the Tang Dynasty, the records describe that there were two 90 meters tall wooden pagodas in Chang'an; their splendor attracted everyone. Chang'an Tower, together with the Giant Wild Goose Pagoda, would have recreated this scene, yet the former one welcomes much fewer viewers than the latter, not to compare their reputations. Despite the tower's outdated design, with a professional team, it still can become a new attraction in Xi'an, since the city has no modern viewing tower or skyline now. Nevertheless, not only the Chang'an Tower, the entire Expo Park faded right after the exposition. One critical reason is distance. Located in the Chanba Ecological District, two hours-drive away from downtown. In 2016, subway Line 3 started operating, which connects the pagoda and the tower in an hour directly, it is more convenient than going to the Terracotta Warriors that has no direct public transportation from the city and takes two hours to get there. As an icon project built in the ancient time, it welcomes over 100,000 people from all over the world on holidays. Unfortunately, the Chang'an Tower and the Expo Park welcome local people as the majority.

Zhang's Other Museums in Xi'an

Throughout Zhang Jinqiu's career, the architect has had both success and failure. The establishment of the Shaanxi History Museum in 1991 has brought her reputation, admiration, and many commissions for museum buildings. Except for the Chang'an Tower, which is a multi-purposed architecture with a large collection of art, Zhang designed as many as ten

museums in Xi'an. I will briefly introduce three of them chronologically to provide a comprehensive view of her style and architectural ideas.

Shaanxi Province Art Museum

Shaanxi Province Art Museum was built in 2000 and opened in 2001. Occupying over 10, 000 square meters, it is the largest art museum in Northwest China. Designated for the vernacular art and culture in Xi'an and western China, this art museum exhibits modern and contemporary work by artists rooted in Shaanxi, and folk art objects. 65 Built as a masonry structure with glass, the museum is awkward in shape. In front of the main entrance, a gigantic column set on a circular base supports a glass canopy extending from the glass facade (Figure 2.21). According to Zhang, except for the facade, the exterior wall is made of textured brick tiles that resemble the decoration of the Han dynasty. 66 Zhang also incorporated Chinese architectural motifs to the sandstone elevation wall. This building, composed in two segments, has blocks protruding on the top half of the exterior, symbolizing the traditional building fractions. The bottom half has arched windows indicating a local residential type in north Shaanxi, the cave house (Yaodong) (Figure 2.22, 23). Besides the traditional elements, one can notice Zhang's modernist approach that appropriated the Guggenheim Museum in New York. The interior of Zhang's museum also presents a spiral-ramped rotunda topped with a large skylight (Figure 2.24, 25). However, the Chinese architect inadequately controlled the sense of space: focused too much on the volume and led to an unbalanced contrast. Nothing alleviates the monotony of the silhouette and monochromatic material.

⁶⁵ Shaanxi Province Art Museum, "Introduction," http://www.sxpam.org/Wen_Show.aspx?nid=9, accessed December 6, 2019.

⁶⁶ Zhang Jinqiu 张锦秋, "Shaanxi Province Library and Shaanxi Province Art Museum 陕西省图书馆, 美术馆," Archicreation 建筑创作, (May 2005): 12.

Xi'an Museum

Opened on the International Museum Day, May 18, 2007, the architect designed Xi'an Museum early in 2000. Zhang continued using stone and glass as the primary materials. Built in her New Tang style, Xi'an Museum appears fragmented in an awkward combination of architectural forms. It is constituted in three sections: the box-like lower section, a traditional circular Chinese architectural type of the Bright Hall (*Mingtang*)⁶⁷ in the center, and two small pavilions on the top of each side (Figure 2.26). The museum is symmetrical in accordance with the ancient Chinese principles of design, which further divides it up. Zhang selected the geometrical arrangement carefully to suggest the Chinese philosophy about the symbolism of a round heaven and square earth (*Tian Yuan Di Fang*).⁶⁸ Zhang added the extensive eaves to assimilate the industrial-looking facade with the imperial Tang style. However, the design is so problematic that these distinct features hardly match each other in scale.

Danfeng Gate Heritage Museum

Part of the Daming Palace National Heritage Park, the Imperial Palace in the Tang dynasty, Danfeng Gate Heritage Museum, hosted a grand opening in 2010 for the park where thousands of people gathered and celebrated. This museum is built on the remains of the burned site of the original Danfeng Gate, the central one of the five gates in the south of the Daming Palace. ⁶⁹ Zhang constructed the museum in the same massive measurements of the original, running east-west nearly 200 meters and 33 meters in depth, with five gateways topped by a *que*

⁶⁷ Mingtang serves as the sacrifice temple and enlightens the space with abundant light and fresh air.

⁶⁸ Feng Hui, "Ancient Idea Behind Olympic Building," China Daily, August 29, 2008, https://www.chinadaily.com.cn/life/2008-08/29/content 11569491.htm, accessed December 6, 2019.

⁶⁹ Tang Xuanzong 唐玄宗, Six Codes of the Tang Dynasty 大唐六典 (Taipei: Wen Hai Press Company, 1962), 156.

pavilion (Figure 2.27, 28). ⁷⁰ However, Zhang considered her project as an archaeological restoration instead of an imitation of the classical. Rather, Zhang believes that it is a shelter for the ruins, not a museum. Thus, the architect avoided using authentic red and black colors of the Tang architecture. Zhang picked the yellow ochre and applied it to the whole structure. Indeed, this monochrome expresses a decayed impression and informs the audience that it is a restored version; associated with the vast quantity of industrial material, they embody a stolid and stiff effect, as if it has just been excavated from the dust. Compared to the Gate of Divine Prowess (*Shenwu Men*) at the Palace Museum in Beijing (Figure 2.29), which also functioned as the main gate of the Forbidden City in the Qing dynasty, Zhang built a grandiose yet lifeless Danfeng Gate. Entered from the west end of the gate, the museum introduces the Danfeng Gate's history through exhibiting the archaeological findings from this site and showing a three-dimensional documentary projected in situ of the Tang ramps and channels (Figure 2.30).

Conclusion

In short, although learning about the western modernism at Tsinghua University, Zhang still demonstrates a strong influence by Chinese classical architecture and philosophy. Her New Tang style is a straightforward combination of modern materials and traditional modules, raised and recognized by her peers and architectural historians, but Zhang disagreed with this general title or the action of categorizing.⁷¹ She explained that they named her style after the

⁷⁰ Gong Guoqiang 龚国强, He Suili 何岁利, Li Chunlin 李春林, "The Excavation of the Ruined Danfeng Gate Site in the Daming Palace of Tang Chang'an in Xi'an 西安市唐长安城大明宫丹凤门遗址的发掘," *Archaeology 考古*, (2006): 42.

⁷¹ Zhang 2014, 77.

establishments of some of her works that are either an imitation of the Tang style, for example, the project at Qinglong Monastery⁷² or shows a considerable impact by it (Shaanxi History Museum). Moreover, Zhang indicated that not all of her works contain a Tang gene.

Undoubtedly, the Shaanxi Province Art Museum is irrelevant to the Tang dynasty, the building contains other Chinese symbols and does not speak fluent modernist's language.

Zhang dislikes mimicry in ancient or modern buildings and has good initiatives. She insists on creating a new kind of architecture that illustrates an image of contemporary China while reflecting its history and culture. Nevertheless, presumably constrained by her education and the time, I think Zhang misinterprets the idea of tradition and modernism. She further articulates that the historical heritage sites can remain the traditional format, as she can balance it with advanced technology and material. First of all, keeping an old structure is not the only way to maintain the historical messages. Secondly, high technology and industrial material sometimes do not acclimate well with the Chinese environment. Lastly, Zhang's blending technique is quite outdated and needs improvements. Chinese architects have been endeavored to find a proper way to combine the Chinese and Western styles that formulates a new national style of architecture and identity, whereas the outcome varies.

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It is a collaboration project by the Japancese architect Tadashi Yamamoto and Zhang Jinqiu who led China
 Northwest Architecture Design And Research Institute. Finished in 1982, Tadashi only designed a monument for the
 Japanese monk Kukai who visited China in the Tang dynasty. Zhang and her team were commissioned by the
 government to create an architectural compounds in the traditional Tang style.
 Zhang 2014, 150.

Illustrations



Figure 2.1 Watchtower in Beijing, China, undated. https://www.pinterest.com/pin/483362972482836985/?lp=true.

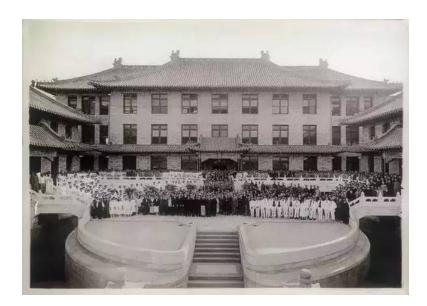


Figure 2.2 Peking Union Medical College Hospital, Beijing, China, undated.

http://chinachristiandaily.com/news/culture/2017-04-13/the-rockefellers-s-connection-with-china--peking-union-medical-college_4564.



Figure 2.3 Nanjing Museum (former National Central Museum), Nanjing, Jiangsu, China, 2018.

http://www.richitek.com/news/find-people-in-the-city-who-took-the-nanjing-1819
https://www.richitek.com/news/find-people-in-the-city-who-took-the-nanjing-1819
<a href="https://www.richitek.com/news/fin



Figure 2.4 Shaanxi History Museum, the main exhibition hall, Xi'an, Shaanxi, China, 2019



Figure 2.5 Nanchan Monastery, Main Hall, Wutai, Shanxi, China, 2019.

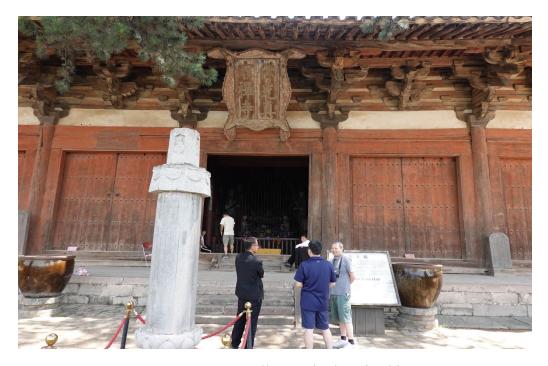


Figure 2.6 Foguang Monastery, East Hall, Wutai, Shanxi, China, 2019



Figure 2.7 Hall of Supreme Harmony, Forbidden City, Beijing, China. 2018.

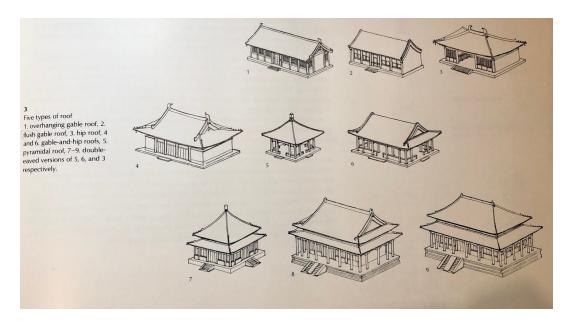


Figure 2.8 Liang Sicheng, Roof types. Liang, Ssu-ch'eng. *A Pictorial History of Chinese Architecture*. Cambridge: The MIT Press, 1985, 9.



Figure 2.9 Shaanxi History Museum, the detail of *chiwei*, 2019.



Figure 2.10 (left) Shaanxi History Museum, belted title, 2019

Figure 2.11 (right) Stone Lion of the Tang dynasty, Shaanxi History Museum, 2019.



Figure 2.12 Shaanxi History Museum, the back view, 2019.



Figure 2.13 Chang'an Tower, Xi'an, Shaanxi, China, 2019.

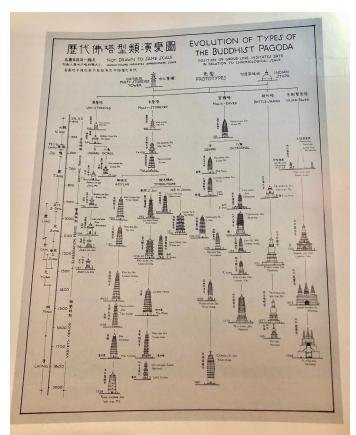
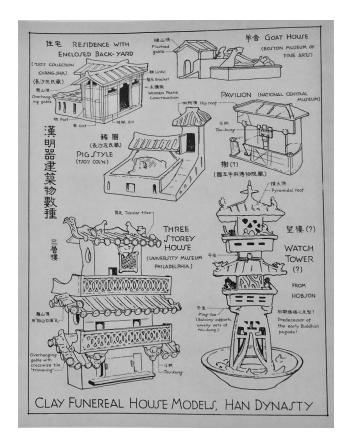




Figure 2.14 (left) Liang Sicheng, Evolution of types of the Buddhist pagoda. Liang, Ssu-ch'eng. *A Pictorial History of Chinese Architecture*. Cambridge: The MIT Press, 1985, 125.

Figure 2.15 (right) Gisling, Sakyamuni Pagoda of Fogong Temple in Ying County, Shanxi, China, 2007.



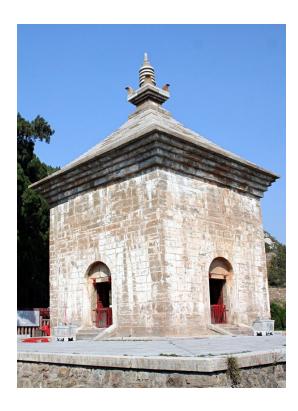


Figure 2.16 (left) Liang Sicheng, clay house models from Han tombs, possibly the prototype of watchtowers, Liang, Ssu-ch'eng. *A Pictorial History of Chinese Architecture*. Cambridge: The MIT Press, 1985, 28.

Figure 2.17 (right) Rolfmuller, Four Gates Pagoda, Jinan, Shandong, China, 2007.



Figure 2.18 (left) Chang'an Tower, the rhythm of the exterior, 2019.

Figure 2.19 (right) Chang'an Tower, a night view, 2019.



Figure 2.20 Chang'an Tower, the oil-painted banyan tree, 2019.



Figure 2.21 Shaanxi Province Art Museum, main entrance, Xi'an, Shaanxi, China, 2019.



Figure 2.22 Shaanxi Province Art Museum, exterior view, Xi'an, Shaanxi, China, 2019.



Figure 2.23 Image of the cave house (*yaodong*) in Northern Shaanxi, http://www.sxfc.gov.cn/c/2018-08-17/35358867.shtml.



Figure 2.24 Shaanxi Province Art Museum, interior view, Xi'an, Shaanxi, China, 2019.



Figure 2.25 Solomon R. Guggenheim Museum, interior view. New York, NY. https://www.guggenheim.org/arts-curriculum/topic/guggenheim-on-the-inside.



Figure 2.26 Xi'an Museum, Xi'an, Shaanxi, China, 2019.



Figure 2.27 Danfeng Gate Heritage Museum, overview, Xi'an, Shaanxi, China, 2019.



Figure 2.28 Danfeng Gate Heritage Museum, entrance, Xi'an, Shaanxi, China, 2019.



Figure 2.29 The Gate of Divine Prowess (*Shenwu Men*), Beijing, China.

https://en.wikipedia.org/wiki/Gate_of_Divine_Prowess#/media/File:Forbidden_C

ity Beijing Shenwumen Gate.JPG.

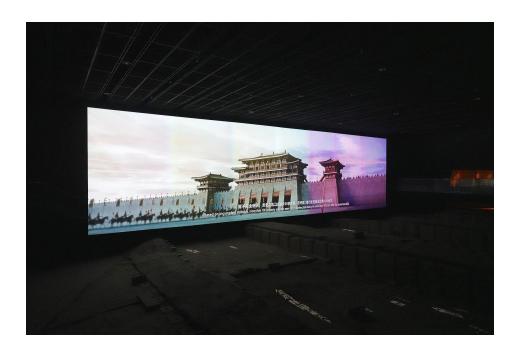


Figure 2.30 Danfeng Gate Heritage Museum, documentary projecting on the original site of the gate, Xi'an, Shaanxi, China, 2019.

Epilogue Identity Issues, Solutions, and A Step Forward Historic Cities' Search for a New Identity Through Museums

"As China's global power grows, Beijing is learning that its image matters. For all its economic and military might, the country suffers from a severe shortage of soft power."⁷⁴

—David Shambaugh

Soft power, a term raised by Joseph Nye in the late 1980s, rests on the ability to shape the preferences of others, in which culture is undoubtedly one of the vital sources. China, accordingly, is well resourced. However, the development of its soft power forms later than hard power. As a common topic that every city faces on its way to modernization, the dilemma between the construction and destruction emerge. The city is changing day by day. For cities that have a bright history and numerous ancient monuments, these precious gifts from the ancestors become obstacles under the objective of modernization and internationalization. Construction requires demolishing, which has been witnessed as a reality in Xi'an. Hence, the identity crisis appears from the inconsonant architectural language, which illustrates China's unresolved social-cultural context.

It took extra time for Xi'an to arrange and build its subway system, as it was interrupted by numbers of ancient sites and tombs underground. The government typically replaced the old with the new. It was not easy to commodify a ruined palace from the Han dynasty, rather than a brand-new building. Contradictorily, under the fast transitioning of architecture, those new creations barely embrace the soft power that is imperative for the city. Nevertheless, the best remediation is to build a museum that holds the relics, represents history, and has a stylish look.

⁷⁴ David Shambaugh, "China's Soft-Power Push: The Search for Respect," *Foreign Affairs*, vol. 94, no. 4, (July/August 2015): 99.

⁷⁵ Joseph S. Nye, Soft Power: The Means to Success in World Politics (New York: PublicAffairs, 2004), 5.

Additionally, the museum plays a crucial role in soft power,⁷⁶ that complements a national identity and evokes citizen's patriotism through the artifacts and architecture itself, and further communicates to the world as a diplomatic agent. Besides, going to museums in China is special. An unfamiliar notion introduced from the West to the majority of Chinese people, museums are intriguing for various reasons, and an important one is that going to a museum is an educational and leisure activity and it provides a source of national pride.⁷⁷ Coincidentally, this favored circumstance meets the people's desire to become the bourgeois class and live a better life as advocated initially in the 1980s as part of the strategies of the Chinese Economic Reform.⁷⁸

As discussed in Chapter Two, an iconic museum building epitomizes a synthesized architectural, cultural, and national identity that reinforces the self-recognition for historic cities like Xi'an. In my opinion, Xi'an does not have one museum that meets these criteria, and even in the West, building museums as proper space for exhibition and art is problematic. The architect Zhang Jinqiu, although prolific, maintains a revivalist's manner and traps herself within the domain of the Chinese academicism. Thus, Zhang's works are adequate in function but still lack a proper identity, not only for the architecture but also for the city. They are not genuinely modern nor modestly attentive to the aesthetic of the past.

To consider the difficulty of building a proper museum in historic cities, I propose to examine two examples which I find successful. A native artist, Wang Shu, created one, the other

⁷⁶ Leanne Hoogwaerts, "Museums, Exchanges, and Their Contribution to Joseph Nye's Concept of 'Soft Power," *Museum & Society*, (July 2016): 313.

⁷⁷ Nick Merriman, "Museum Visiting as a Cultural Phenomenon," *The New Museology*, ed., Peter Vego (London: Reaktion Books Ltd, 1989), 164.

⁷⁸ Ross Garnaut, "40 Years of Chinese Economic Reform and Development and The Challenge of 50," *China's 40 Years of Reform and Development: 1978-2018*, ed., Ross Garnaut, Song Ligang, and Fang Cai, (Canberra: ANU Press, 2018), 29-30.

is by a famous Chinese-American modernist, I. M. Pei. Both have dramatically different solutions that resolve the regional identity crisis.

Wang Shu: Ningbo Museum and the Spirituality of Mountains and Water

A Native Son

Born in 1963, Urumqi, Xinjiang, Wang Shu earned a bachelor's and master's degree in architecture at the Nanjing Institute of Technology (now Southeast University). Graduating in 1988, Wang spent much of the 1980s absorbing western ideas amid the Economic Reform, and the 1990s in seclusion, as he described, working with local artisans to restore old buildings. ⁷⁹ He prepared himself with discoveries and reflections. Thus, in 1997, Wang established the Amateur Studio with his wife, Lu Wenyu. Based in Hangzhou, Zhejiang, this decent-sized city is in southeast China, known for its scenic beauty and abundance of cultural monuments like Xi'an. Their studio has few employees. After he received a Ph.D. from Tongji University in 2000, Wang invited some of his students to work and study with them. Wang has always been critical about China's architecture and its environment of the industry, while he scrutinizes himself, too. Giving the name "amateur" to his studio, in the sense of being a literati, not a professional in ancient China, Wang explains in a manifesto written in 1999, saying that "This is not about what perfection in architecture might be, of course. That in itself is amateurish. Amateur architecture merely underscores that freedom is more important than standards and that there is a wish to see the chaos that is created when the credibility of authorities is challenged."80 Wang always identifies himself as a literati first, then an architect. He spoke about his attitude toward architecture at his Pritzker Prize ceremony in the Great Hall of the People, Beijing, that he would

⁷⁹ Aric Chen, "The Opposition of Craft," *Wang Shu: Amateur Architecture Studio*, ed.,Kjeld Kjeldsen (Louisiana: Louisiana Museum of Modern Art, 2017), 180.

⁸⁰ Wang Shu, "Amateur Architecture," Amateur Architecture Studio 2017, 62.

rather be an amateur if modern architecture is all about the professional architecture system.⁸¹ Dedicated and native, Wang creates his work out of the composition of Chinese landscape paintings, with a concentration on technique and material.

Wa Pan: A Signature Technique

"This tabula-rasa cycle of demolition and construction is seen across the country. However, by building the museum in Ningbo out of demolished houses, Wang Shu gives form to a subtle comment on the official practice."82

Opened in 2008, Ningbo Museum, located in Ningbo, Zhejiang, occupies 30,000 square meters. The main building is three-storied, and some places are five. Wang treats the vast compound as a big mountain that mediates its industrial and urban surroundings and revitalizes the city (Figure 3.1). Outlined by an irregular angled shape, the organic facade neutralizes the hardness strikingly. Wang built this facade in a traditional technique of *wa pan* that was prevalent in the Ningbo area and has almost disappeared nowadays. It is a local stacking craft that layers down brick tiles for building houses (Figure 3.2). From every glimpse, one would not find any repeated sequence, thanks to the persistence of the Amateur Architecture Studio for collecting 80 kinds of resolved tiles from the households, in which the oldest dated to 1500 years ago. Intervolved with bamboo-textured and moded concrete, Wang surpassed the barriers of the height limitation and shape variation. Traditionally, the highest *wa pan* walls are 8 meters tall, and the exterior wall of the museum reaches 24 meters. Besides, too immense, although calculated meticulously, Wang had no control over the result for the integration of the materials. The architect convinced others philosophically, to wait calmly for nature's surprise. Gladly,

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⁸¹ Chen, "The Opposition of Craft," Amateur Architecture Studio 2017, 180.

⁸² Wang 2017, 21.

mother nature spoils her native son. The grey gradient of the tiles and the overlay of concrete all have evolved into a different natural form.⁸³ Embedded with randomly proportioned glass windows some framed by bare concrete, that in size and shape bring freedom and fun into the dense structure (Figure 3.3). Using the bricks and tiles, salvaged from destroyed villages, and the technique, resurrected by local craftsmen, Wang devoted the spectacular facade to China's rapid urban change and fast-fading history.

The Spirituality of Mountains and Water

Eternally inspired by the Chinese landscape paintings, Wang already composed a mountain, the dominant structure of the museum, the literati also positioned water ponds in several places. For example, on the ground floor, Wang reserved a shallow one with mosses and grass in between two buildings connected by a simple bridge. It is the most common scene one would find in the rural area, for Ningbo is a harbor city and has countless river branches. On the leading rooftop, Wang situated a reservoir, tiled with turquoise and white ceramics. Clear like a mirror; it reflects shadows of the architecture and visitors (Figure 3.4-5). Wang's painterly gesture is virtuoso, for his arrangement of the spatial relationship and color contrast.

Building Houses

Ningbo Museum's interior coheres the rhythm of the *wa pan* wall and provides fully functional exhibiting galleries. The crisscrossed ceiling decoration refers to the bamboo scaffolding that was popular in southern China, which is still seen in Hong Kong (Figure 3.6-7). Wang designed each gallery individually as architecture (Figure 3.8-9). It was a compromise because the authority kept the collection's information confidential for the architect and changed

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⁸³ Wang Shu 王澍, Building Houses 造房子 (Changsha: Hunan Fine Arts Publishing House, 2016), 48-49.

the function for each space throughout the construction. Although this is not the best way of planning, this is how it works in China now.⁸⁴

After the finish of the museum, the Amateur Architecture Studio was nervous about residents' reactions. Wang organized an open talk to them about his ideas, processes, and hopes for this project. Surprisingly, more and more citizens went to him and expressed their fascination with this architecture. The craftsmen who participated in building the exterior wall told him that people asked them to build their houses using the *wa pan* technique. These changes are satisfying. Nevertheless, Wang encapsulates the traditional technique and material that stand for local history into modern vocabulary and materials. Wang reminded readers in his writing that without prompting similar solutions in public architecture, China's traditional architecture and culture will be forgotten soon by the Chinese themselves, because of the low regional awareness of history, and the empty lies from museums and architects.

I. M. Pei: Suzhou Museum's Regionalism and Modernism

A Voyager and Nostalgist

I. M. Pei, the most celebrated Chinese-American architect, had roots in Suzhou, Jiangsu, China, Pei only stayed there for three months in childhood. Born in Guangzhou, raised in Shanghai and Hong Kong, these memories in China had always accompanied Pei in his unconscious mind that bounded the voyager firmly to this native land wherever he went.⁸⁷ Having studied with Walter Gropius, the founder of the Bauhaus School at Harvard University,

85 Wang 2016, 49.

⁸⁴ Wang 2016, 46.

⁸⁶ Poul Erik Toiner, Kjeld Kjeldsen, and Mette Marie Kallehauge, Amateur Architecture Studio 2017, 8.

⁸⁷ Pei talked about the influence of Chinese traditions on him with Anne G. Ritchie in 1993, expressing that "Subconsciously, I'm sure it has to be there somewhere, it has to be there." See *Interview with I. M. Pei, February 22, 1993*, National Gallery of Art, Washington, Gallery Archives, 39.

Pei presented a design of a modern museum in Shanghai (Figure 3.10) as his graduation thesis that won the praise of Gropius as "the finest piece of student work I've ever seen." Pei stated that he wanted to do something about China, trying to show that the modern style could accommodate local variation. At that time, all built museums in Shanghai were Neoclassical. Pei Although this project did not have the chance to launch, the interest in museum projects had developed for Pei. He shared his forever passion in civic work, which the museum best exemplifies the word civil, "For it sums up everything," he said. Pei illustrated with the Louvre: beyond its place as a museum, it is a civilization that adheres to art and history through architecture.

From his East Building at the National Gallery of Art in Washington DC to Grand Louvre in Paris, Pei had demonstrated a spectacular capacity of uniting the old and the new. When he returned to Suzhou after 70 years of voyaging, he took on the establishment of Suzhou Museum, punctuated the recreation of his childhood playground and achievement of building a modern museum in China.

Cubist and Chinese Garden

Located in the historic district, Suzhou Museum is surrounded by multiple traditional gardens that are world heritage sites, for example, the Humble Administrator's Garden and the Lion Grove Garden, which was the Pei's ancestral temple (Figure 3.11-12). To assimilate with the neighborhood, Pei organized the museum in the same garden layout, consisting of three key elements: water, rocks, and plants (Figure 3.13).⁹¹ A master in light, space, and geometry, the

⁸⁸ Michael Cannell. I. M. Pei: Mandarin of Modernism (New York: Carol Southerm Books, 1995), 83-84.

⁸⁹ Philip Jodidio and Janet Adams Strong, I. M. Pei: Complete Works (New York: Rizzoli, 2008), 7.

⁹⁰ I. M. Pei, Introduction to *I. M. Pei: Complete Works*, 8.

⁹¹ Jodidio and Strong 2008, 317.

architect treated this project as a gesamtkunstwerk, montaged his two traditions, with modernist forms wrapped in Chinese aesthetics, and vice versa. Here, Pei's remarkable rigid diagonals and crystalline structures coexist and melt well with boulders from Lake Tai and wisteria shades that were planted hundreds of years ago. Once entered, the first scene that visitors see is *Range of Stone*, a Pei's sculptural piece. Inspired by Chinese landscape painting, Pei had craftsmen to slice the local rocks, aged them by a blowtorch and collage onto a white wall next to a water pond (Figure 3.14). Flat and minimal, it resembles a natural look yet is completely artificial. Pei controlled two seemingly opposite impressions precisely and earned the utmost harmony.

The Suzhou Museum also shares in common with Pei's other museum works, for instance, the facade of Museum of Islamic Art in Doha, Qatar, and the interior of the Miho Museum in Kyoto, Japan (Figure 3.15-18). The facades, both in a box-like silhouette, Pei adjusted the color and texture of the exterior walls. As for the interiors, both are diamond-shaped and supported with steel structures, Pei covered the Chinese one with grey granite tiles and left the Japanese one bare. As an established modernist, Pei had a preference in shape and material. Notwithstanding, his mastery is about individualizing this iconic style to suit different local cultures and the environment. Additionally, by using granite tiles on the roof, not the local ones, Pei accomplished his declaration about not wanting to use anything traditional, while evoking the spirit of the tradition.⁹³ These tiles, although involved with fewer details, produce the same sensuality of a unified and delicate Chinese roof.

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⁹² Clare Jacobson, New Museums in China (New York: Princeton Architectural Press, 2013), 85.

⁹³ Jacobson 2013, 85.

Learning from Each Other: The Next Step for Chinese Architects

The two architects, Wang Shu and I. M. Pei, different in age, educational background, and career level have two things in common that may be true to all Chinese architects—the influence of Chinese civilization for themselves and the purpose of preserving and promoting China's culture and history among people. In this consequence, Zhang Jinqiu is also part of them. Nevertheless, these three architects possess distinct forms of expression, in which Wang and Pei both revealed outstanding examples of synthesizing the Chinese and Western vocabularies and fluently generating a unique architectural language. Instead, Zhang's ability to create new languages and her proficiency both seem lacking. A straightforward way to improve is to learn from each other.

Firstly, Zhang visualizes a tradition too specific. Both noticed Chinese roofing details, Pei deleted all extra decorations and retained the overwhelming volume of it, presenting an abstract skeleton of the old one, plus embedded with his characters of perspectival crystal glasses (Figure 3.19). On the contrary, seen ubiquitous in Zhang's roof design, she prefers to keep the overall classical structure and add minor changes seeking for modernism (Figure 3.20). Undeniably, Zhang has a realistic approach in general, yet rather than filling out a vivid replica, these small adjustments she makes, potentially split the wholeness of the traditional and cut down the impression of her innovation.

Similarly, in terms of material and technique, Zhang insists on using concrete, steel, and glass and abandons the original. Whereas, the instance of Wang's *wa pan* wall opens up the possibility of not only inheriting the ancient wisdom but also improving its functions by adding modern material. To ensure the consistency of local tiles and concrete in pattern and

functionality, Wang did many experiments on his other projects testing the performances before applying to the Ningbo Museum.⁹⁴ This method might apply to the bracket set. Originated in timber, one can imagine a *dougong* that maintains the wooden texture but made of burnished steel or concrete.

Reflecting on but not limited to Zhang, the above discussions made the comparisons among Chinese-rooted architects and raised concerns for the possible next steps. Today's China, unlike the seventh century when the whole city of Chang'an was planned for the emperor, nor the 1950s, during the scholar Liang Sicheng's period, when the architects had no autonomy superior to the authority. The current environment so far the most transparent and free one. Architects can be influential nowadays. Wang Shu persuaded the mayor to agree on using the so-called "old" wa pan technique. I. M. Pei asked the Suzhou government to clean up water channels and make a preservation plan first. Otherwise, he would not accept the commission. According to Pei, he wrote about the question of preserving China's historic cities in the face of the unprecedented and explosive modernization and industrialization of the country, concerning that the matter is "whether there is the political will and administrative capacity to see it through to execution."

Since the government has been modifying, people have a growing expectation of seeing icon projects. Therefore, the duty is back on the architects. After Wang Shu won the Pritzker Prize in 2012, a controversial sound was heard, and many predictions about who will be the next Chinese winner have never ended. Awarded at an early stage in his career at the age of 49, Wang

⁹⁴ Wang has applied the wa pan technique on his other project prior the adoption on the Ningbo Museum. For example, Xiangshan Campus of China Academy of Art, finished 2007. See Wang 2016, 46.

⁹⁵ Jodidio and Strong 2008, 312.

⁹⁶ Jodidio and Strong 2008, 314.

understood others' questions about his qualifications as a laureate. Wang earned the prize with the support of his fellow amateurs, and the spirit of an amateur. According to the jury, they won the prize for the "ongoing commitment to pursuing an uncompromising, responsible architecture arising from a sense of specific culture and place." The sympathy and humanistic concern that Wang and his studio undertake for the regional environment and architecture are the most exceptional.

Unfortunately, unlike Ningbo or Suzhou, Xi'an does not have a spectacular modern museum in my perspective. With the city's fast evolution, the traditions are inundated with pop culture and still decay quickly. This summer, I went to the shopping mall Joy City in Xi'an frequently. Opened in 2018, I am so familiar with its location—next to the Giant Wild Goose Pagoda, Da Ci'en Monastery, and a small plaza where situated a statue of monk Xuan Zang built early in the 2000s. I grew up flying kites at the plaza and went to middle school one block away. However, every time I go back, it gets more unfamiliar to me. Dominated by the neon lights, the city is indulged in the economic boom (Figure 3.21).

Nevertheless, the architecture of the luxury hotel W Xi'an, also opened in 2018, belonging to the Marriott International Company, proclaims its landmark iconicity in the city. Designed in 2012 by the A&S Architectural Design, based in Beijing, China, the building inherits an abstract figure of mountains in the traditional Chinese landscape painting and the letter "W," located next to the Tang dynasty-themed park, Tang Paradise built by Zhang Jinqiu (Figure 3.22). The exterior curtain wall diminishes gradually. This avant-garde appearance soon made it famous in the city. Albeit its innovation of the structure, it functions fully as a

⁹⁷ "Jury Citation," The Pritzker Architecture Prize, https://www.pritzkerprize.com/laureates/2012, accessed December 8, 2019.

commercial building. If it were a museum that had been built in this location and style, it would have become an icon project. As I. M. Pei claimed, museums are a microcosm of civilization. Only museum buildings can convey national and cultural identity. I hope in the future, Xi'an will have a truly modern museum that speaks in a new architectural language and with the local accent, instead of becoming an empty shell that merely shelters lifeless people without a spiritual home.

Illustrations



Figure 3.1 Wang Shu, Ningbo Museum, Ningbo, Zhejiang, China.

https://www.dezeen.com/2016/08/18/video-interview-wang-shu-amateur-architecture-studio-ningbo-history-museum-movie/.

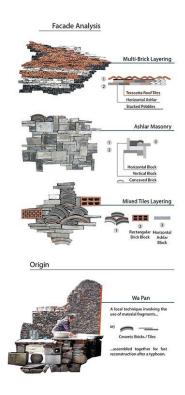


Figure 3.2 (above) The *wa pan* technique, https://www.pinterest.com/pin/114138171779249197/?lp=true.

Figure 3.3 (below) Ningbo Museum, detail of the facade, https://www.pinterest.com/pin/114138171779249197/?lp=true.





Figure 3.4 A water pond between buildings.

https://www.gettyimages.com/detail/photo/ningbo-museum-of-art-view-the-water-platform-royalty-free-image/627846930.



Figure 3.5 A giant reservoir on the roof terrace.

https://www.architectural-review.com/buildings/ningbo-museum-by-pritzker-priz
e-winner-wang-shu/5218020.article.

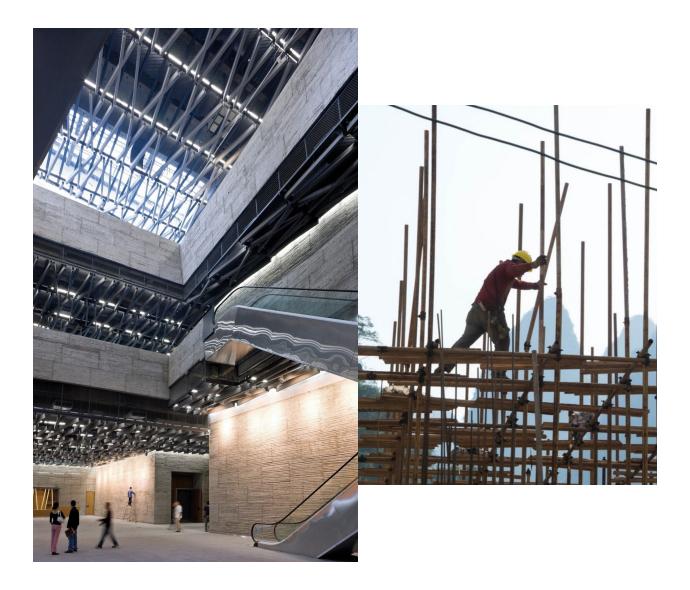


Figure 3. 6 (left) Ningbo Museum, the interior. http://www.urbanphoto.net/blog/2012/04/11/the-ningbo-history-museum/

Figure 3. 7 (right) Bamboo scaffolding technique.

https://www.eco-business.com/opinion/bamboo-natures-forgotten-solution-for-green-industry/



Figure 3.8 Ala Old Ningbo Folk Customs Hall, exhibition view, http://www.nbmuseum.cn/jbcl/allnb.html.



Figure 3. 9 Bamboo Carving Hall, exhibition view, http://www.nbmuseum.cn/jbcl/zkys.html.

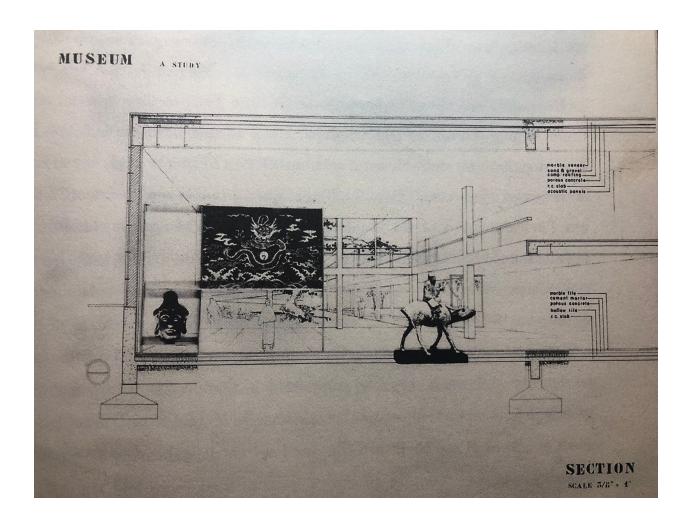


Figure 3.10 I. M. Pei's graduation thesis at Harvard University, design for a modern museum in Shanghai. Michael Cannell, *I. M. Pei: Mandarin of Modernism* (New York: Carol Southerm Books, 1995), 85.



Figure 3.11 Humble Administrator's Garden, Suzhou, Jiangsu, China. Jakub Halun, 2009.



Figure 3.12 Lion Grove Garden, Suzhou, Jiangsu, China. Jakub Halun, 2009.



Figure 3.13 A bird view over the historic area. http://pei-architects.com/projects/suzhou-museum/.



Figure 3.14 Range of Stone, https://architizer.com/projects/suzhou-museum/.





Figure 3.15 Suzhou Museum, exterior wall. https://architizer.com/projects/suzhou-museum/.

Figure 3.16 Museum of Islamic Art in Doha, Qatar, the main entrance.

https://theculturetrip.com/middle-east/qatar/articles/the-best-museums-and-art-galleries-in-doha/.





Figure 3.17 Suzhou Museum, the interior,

https://www.archdaily.com/881407/the-evolution-of-light-in-im-peis-museums-fr

om-dark-concrete-voids-to-luminous-glass-pyramids/59de0f55b22e38292f0005dc

-the-evolution-of-light-in-im-peis-museums-from-dark-concrete-voids-to-luminou

<u>s-glass-pyramids-photo</u>.

Figure 3.18 Miho Museum, the interior, https://www.archdaily.com/639108/miho-museum-i-m-pei/556f9600e58ece3dc40 0002b-miho-museum-i-m-pei-photo.



Figure 3.19 Suzhou Museum, main entrance, https://www.xjtlu.edu.cn/en/life-at-xjtlu/museums-and-culture.



Figure 3.20 Shaanxi History Museum, the elevation. Xi'an, 2019.



Figure 3.21 The statue of monk Xuan Zang, behind it is the Giant Wild Goose Pagoda, Xi'an, 2019.



Figure 3.22 W Xi'an, located next to the Tang Paradise, https://www.wxianhotel.cn/.

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