Reconstituting Chinese Building Tradition
The Yingzao fashi in the Early Twentieth Century

Architecture in early-twentieth-century China changed in a rapid and complex way. Leading the transformation was the development of the so-called treaty ports and the foreign settlements since the mid-nineteenth century, resulting in an influx of foreign engineers and architects. From the early twentieth century onward, young Chinese students, instead of preparing for the traditional civil service examinations, pursued architectural education in Europe, America, and Japan, bringing back to China engineering knowledge, Beaux-Arts training, and even Bauhaus sensibilities; on their return, they entered practice in foreign and Chinese architectural firms, and founded and taught at schools of architecture in many parts of the country. One of the most important issues in this context was what constituted “Chinese architecture.” Early Christian missions in China sought the approach of assimilation and adapted traditional Chinese building forms to new building types such as churches and schools; this was brought to a high level of development by Harry Hussey, Henry Murphy, Lü Yanzhi, and others from the 1910s to the 1930s. Scholarly interest in Chinese architecture also flourished in the early twentieth century, with European and Japanese scholars making considerable progress in research in Chinese architecture. All these changes took place within the context of a profound challenge to Chinese nationhood: as Joseph Levenson memorably remarked, China at the turn of the twentieth century faced a contraction from being “all under the heaven” (tianxia) to being “a country in the world” (guojia). The intellectual, cultural, and political struggle of this transformation erupted in events such as the Hundred Days’ Reform (1898), the Boxer Rebellion (1900), the Republican Revolution (1911), and the May Fourth Movement (1919).

In this paper, I examine the response of Chinese scholars and architects to European and Japanese research on Chinese architecture in the early twentieth century. I analyze several early-twentieth-century attempts to reprint, edit, and annotate a Northern Song dynasty (960–1127) construction manual, the Yingzao fashi (1103), each revealing an aspect of the project to define Chinese architecture. As manifested in the research on the Yingzao fashi by a number of Chinese scholars and architects, the project to reconstitute and to understand this text was closely connected to broader intellectual issues in early-twentieth-century China: nationalism, philological scholarship and modern historiography.

The Yingzao fashi
The Yingzao fashi is a construction manual that was printed in the Northern Song dynasty. Its thirty-four chapters set out rules of construction in masonry, structural and non-structural timber, tiles, and painted decorations. The text is illustrated extensively with drawings in chapters 29 to 34. The manual itself is preceded by an introduction on preliminary work and two chapters on construction terms and their sources. Earlier construction manuals existed, but the
Yingzao fashi—compiled by the assistant director of the office of public works, Li Jie (d. 1110), who served the imperial court for thirteen years in the Northern Song dynasty—introduced the crucial idea of a modular unit. The central concept is the “timber unit” (cai, in chapters 4 and 5), which establishes modular systems for all timber building components. On this basis, the “work unit” (gongxian, in chapters 16 to 25) measures the amount of work required for all types of skilled and unskilled construction, and the “quantity unit” (lioli, in chapters 26 to 28) measures quantities of materials.1 In 1097, Li was commissioned by the emperor to compile the Yingzao fashi; it was completed in 1100, and published in 1103. The book had very different objectives from those of the Ten Books of Architecture by Vitruvius, the only earlier surviving architectural treatise. While Vitruvius set out to develop a view of architecture as a technical enterprise as well as a means to achieve beauty and intellectual enlightenment (for instance, the implications of venustas), Li wrote about imperial palaces where colors and forms were strictly codified in accordance with hierarchy and power. What he provided was a uniquely complete record of building construction of the Song dynasty and the modular system central to Chinese construction, information conveyed both in text and in drawings of orthographical projections of plans, elevations, and sections, as well as close-to-axonometric views. As a manual of construction of imperial palaces, the Yingzao fashi was still in use in the Ming dynasty (1368–1644).6

It is not difficult to imagine the need for a construction manual at the time. The Northern Song capital, Kaifeng, was a city three times the size of ancient Rome, with an estimated population of 1.4 million people. Situated strategically at the junction of the early Grand Canal and the Yellow River with an excellent water-borne transportation network, Kaifeng—much like future Renaissance cities—was a boomtown, the site of creativity unparalleled in Chinese history. The imperial administration was sustained by education and civil service examinations; all forms of art, literature, and technology were developed to a high level of production and sophistication. One of these developments, that of the printed book, was central to this extraordinary Song-dynasty flowering of technological innovations and culture. Behind the prosperity, however, corruption was so rampant—for instance, sons of established official families found “special ways” outside the imperial civil service examinations to join the civil service—that sweeping reforms were instituted in politics, economy, and education. Construction, then as now, seemed to foster corrupt practices, and Li’s Yingzao fashi was therefore important in monitoring construction in two ways: in helping to ensure clear standards of construction, and providing the basis for estimating the cost of materials and labor once the sizes of the buildings were known.

The Yingzao fashi, Chinese Building Tradition, and Nationalism
The first person to see the contemporary relevance of a construction manual in early-twentieth-century China was the politician Zhu Qiqian (Chu Ch’i-ch’ien, 1872–1964) (Figure 1). A scholar and collector, Zhu was a capable administrator who had entered politics mainly through his connection with the powerful militarist Yuan Shikai (1859–1916). Yuan first served the Qing (Ch’ing dynasty, 1644–1911) court, but in 1911 supported the Republican Revolution; due to his northern power base, he took over the provisional presidency from Sun Yat-sen (1866–1925) to become the first president of republican China in 1913.

From 1906, Zhu served Yuan in various capacities, and between 1912 and 1916 was minister of transport, minister

Figure 1 Zhu Qiqian as minister of the interior, 1913
of the interior, and acting premier in Yuan’s republican governments. After Zhu left politics following the death of Yuan in 1916, he occasionally took part in special government missions. In one of these missions in 1918, he led a government delegation to Shanghai to negotiate a political structure for China with representatives of the southern provinces, which had become virtually independent.10 Passing the city of Nanjing and accompanied by the provincial governor, he discovered a manuscript of the Jingzao fashi at the Jiangnan Library, which had been established in 1907 with the purchase of one of the finest book collections in the Qing dynasty, the Bajianjuan Lou.

Zhu greatly valued this amazing discovery, although the manuscript he found was only a transcription of a Song-dynasty reprint. The reasons for Zhu’s excitement are complex, but they can perhaps be understood in two ways: he saw the text playing a significant role in a renewal of the Chinese building tradition, and he considered this renaissance important to the establishment of the Chinese nation-state. The first reason was central. Zhu had a passion for construction that was unusual for a Confucian scholar-official. The prevalent Chinese scholarly tradition conceptualized “forms of practice” as fundamentally separate from, and less important than, contemplation of universal principles (codified in phrases such as ti-yong, ben-mo, or dao-qi).9 This binary intellectual conception was clearly reflected in the high social position of the gentry-literati (shidafu) class and the low social position of craftsmen (gongjiang) in a strictly Confucian social hierarchy. Despite the achievements of subcultures to the contrary,10 scholarship deliberately and consistently distanced itself from using formal logic and techniques of practice as an instrumentalizing process. To a greater degree than in the Western traditions of architecture, construction in China was seen as a matter of manual skills rather than a form of beauty and intellectual inquiry. The contrast between Li’s Jingzao fashi and Vitruvius’s Ten Books of Architecture is one interesting demonstration of this distinction.

Perhaps partly due to this cultural condition, the significance of architecture as defined since the Italian Renaissance was not always grasped by leading Chinese intellectual reformers during Zhu’s time, despite the building boom and the influx of foreign architects in the foreign settlements in China since the mid-nineteenth century. For instance, when drafting a curriculum in 1898 to establish an imperial university (Jingshi Daxuetang) on the basis of an educational institution (Tongwen Guan) founded in 1862, Liang Qichao (Liang Ch’i-ch’ao, 1873–1929) did not include architecture as a subject.11 Liang Qichao’s awareness of architecture, as he admitted in his diaries, came much later, during his travels to European countries in 1918–19.12

Zhu’s unusual passion for construction began when he was a bureau chief of the Beijing police department in 1906. He made use of his office to inspect all cultural and architectural relics of the city, to learn about construction from traditional carpenters, and to gather surviving manuals of construction.13 A significant stimulus for his interest in construction came from his involvement in the Anglo-German–funded railway construction linking Tianjin to Nanjing (Tientsin–Pukow Railway) between 1907 and 1912. For this project, Zhu was in charge of the northern German section between Tianjin and Jinan. He was particularly impressed by the engineering feat of constructing a 1,255-meter bridge over the Yellow River, the longest span bridge in China at the time, comparable to the Fourth Bridge in Scotland.14 He kept a close eye on the entire design and construction process with great enthusiasm, on one occasion lowering himself into the caisson foundations of the bridge to inspect soil conditions.15 One of the exceptional aspects of the designs of the railway’s rural stations—Nanxiakou Station (ca. 1911) and Dezhou Station (ca. 1912)—is that they incorporated Chinese building forms, a gesture that the British found to be “too expensive for the purpose they are destined to serve.”16 The stations are one of the first attempts to adapt Chinese building forms for new building types, before Murphy’s Yale-in-China (Yali) campus in Changsha (1914) and Hussey’s Peking Union Medical College (1916–18).17 Zhu, who was later to scrutinize Hussey’s drawings of Peking Union Medical College and to express his delight at Hussey’s adaptations of Chinese building forms,18 would have appreciated these tentative experiments.

Zhu’s contact with German engineers and architects resulted in a number of other close collaborations. One of the first urban renewal projects he undertook as minister of the interior was the controversial demolition of the walls of the enceinte gate (Qianmen) at the southern edge of the Forbidden City in 1915–16, in order to improve the traffic conditions. The project won the crucial support of Yuan, who presented Zhu with a silver pickaxe for the opening ceremony.19 Here Zhu worked with Curt Rathkegel (1876–1946), a German architect who lived in China for twenty-five years and whose design of a grand Chinese parliament building in 1910, “approximately twice the size of the Reichstag,20” would have become one of most significant landmarks of architecture in China had the Republican Revolution not stopped its construction. Another of Zhu’s lasting architectural legacies was the establishment, between 1919 and 1937, of an administrative structure for the beach
resort Beidaihe, which began as a prime location for summer holiday villas for Westerners. Founded around 1893, by 1917 the resort included more than one hundred villas and a population of almost one thousand. Communities began to form and all matters, including adjudication of local Chinese disputes, came to be handled by residents’ groups such as the Rock Point Association, established by the British and the Americans. Seeing this as a form of colonization, Zhu initiated an administrative structure (gongyi bui) to oversee the development of community facilities such as roads, medical facilities, schools, and parks, contributing significantly to making Beidaihe the favorite summer resort of generations of Chinese politicians. Here Zhu also tried his hand at designing his own house and other structures nearby, perhaps assisted by German engineers.

The most important result of Zhu’s exposure to German engineering and architecture and to Hussey’s design of Peking Union Medical College was that his energy became focused on developing a “Chinese architecture.” Zhu’s challenge was twofold: to redress the inadequate emphasis placed on knowledge of construction in China, and to catch up with the research on Chinese architecture by European and Japanese scholars. His discovery of the Yingzao fashi gave him enormous hope of accomplishing both. Zhu saw Li as the model of an extraordinary and high-ranking official in Chinese history who took construction knowledge seriously, and viewed himself as an inheritor of Li’s achievements. He likened his inspection of ancient buildings, his learning from carpenters and craftsmen, and his collecting of construction manuals—all carried out while serving as a police bureau chief in Beijing—to the work of a Song-dynasty office of public works (jiangzao). In the Yingzao fashi, Zhu recognized an important key to the knowledge of construction that had not been studied by European and Japanese scholars. His connection with German architects and engineers would have drawn his attention to the works of Ernst Boerschmann, who made study trips to China in 1902–4 and 1906–9, and who obtained materials from Rothkegel. Boerschmann’s studies in Chinese architecture, beautifully illustrated with photographs and drawings, commanded respect among Sinologists throughout the world. Zhu was also informed of the remarkable progress made by Japanese scholars of Chinese architecture through his longtime associate Kan Duo (1875–1934), a graduate of a Japanese university and a fellow researcher in Chinese architecture. But none of the works by these or other European and Japanese scholars took into account the Yingzao fashi.

Zhu’s discovery of the Yingzao fashi also had a much larger meaning: the development of a sense of the importance of a Chinese architecture to a Chinese nation-state. In 1919, at the time Zhu found the Yingzao fashi, China was very different from the empire of the Northern Song dynasty; while it had seen no compelling reason to change its intellectual outlook since the twelfth and thirteenth centuries, the West had come a long way from the medieval period. This difference was manifested in China’s first violent confrontation with Britain in 1839, when the Qing court tried to clean up the British opium trade in China and was defeated by the British navy. The war reparations and concessions of trading rights and territories in the Treaty of Nanjing (1842) signed by China and Britain led to a string of treaties resulting from vociferous demands from other Western powers. In 1919, faced with what can only be described as a catalogue of military and political disasters in China’s confrontations with Western nations, most scholars in China looked to the recent past with immense sadness and agitation. China at the turn of the twentieth century was particularly shaken by two events, the defeat of the recently established Chinese navy by the Japanese in 1895 in a war over the control of Korea, and the failure of a reform attempt by the young emperor Guangxu, instigated by the key intellectual figures Kang Youwei and Liang Qichao in 1898, known as the Hundred Days’ Reform. The first event, the defeat of the Chinese navy by Japan in 1895, and the ensuing Treaty of Shimonoseki, drew China’s attention to the dramatic transformation of Japan in the Meiji period (1868–1912) from a former “tributary” region to a strong nation-state. The second event, the failure of the first coherent program of reform in areas of education, military establishments, and economic developments, all on imperial initiative, induced a deep sense of frustration, particularly for a new generation of reformers.

Zhu supported the Hundred Days’ Reform and, like Liang Qichao and many of China’s reformers, had a fascination with Western knowledge that was inextricably linked with a desire to reimagine Chinese traditions. As a young man, Zhu was exposed to reform thinking in China, which was manifested in several ways, all stressing a form of unchanging “Chinese-ness” to anchor the changes. Interestingly, the ancient binary conceptions of ti-yong, ben-mo, and dao-qi were appropriated by the reform thinkers. The binary conception was first employed to interpret Western technologies as useful knowledge (yang) complementary with the Confucian tradition (ti); this “self-strengthening” (ziqiang) thinking was given crucial support by Zeng Guofan (1811–1872), a powerful general who suppressed the Taiping Rebellion. While affirming the Qing imperial system, he nevertheless regarded “learning to make explosive shells and steamships and other instruments as the work of
first importance,” and arranged to purchase machine tools to make weapons. But the binary conception was soon used by reformers to mount a strong critique of the divide between “thought” and “practice,” a view that was essential to Zhu’s reform outlook. Zheng Guanying (1842–1922), an industrialist who turned his attention to reform in influential writings such as Shengshi weiyian (Words of warning in a prosperous age) in 1894, clearly regarded the separation between thought and practice as a crucial intellectual misconception, and advocated a return to an ancient synthesis of the two through the study of Western developments.

At the turn of the twentieth century, Chinese intellectuals’ increasing familiarity with Western cultures had resulted in a shift in their reform thinking from an advocacy of developing industry and commerce to the creation of a Chinese nation-state conceived along Western models. As discussed, the idea of a “country in the world” had never been part of traditional Chinese territorial conceptualization. Beginning in the 1890s, reformers such as Liang Qichao proposed intellectual reform, promoting a view of “modern knowledge” as well as a renewal of Chinese traditions, using the intellectual achievements of the European Enlightenment as the foundation for a modern Chinese nation-state. At the same time, frustrated with the slow pace of change, Sun Yat-sen believed that nothing short of an overthrow of the imperial system and the establishment of a republican government could transform China into a nation-state comparable to those in the West.

In his youth, Zhu had been exposed to the reform literature of thinkers such as Zheng, and he had come into contact with Liang Qichao when both he and Liang served in Yuan’s republican government. In fact, his whole political career was deeply intertwined with changing realities of reform shaped by different ideas, from “self-strengthening” to republicanism. Zhu’s passion for construction and his critique of the deep intellectual divide between dao and qi—theory and practice—in Chinese scholarly traditions were closely bound up with the larger intellectual advocacy of reconstituting “Chinese-ness” and synthesizing thought and action. Throughout his life, he remained committed to this conviction.

To advance his course, publicizing the Yingzao fashi was an urgent task for Zhu. With the help of the provincial governor, he issued a photolithographic reproduction of it in reduced size as early as 1919 (Figure 2). The following year, he engaged the Commercial Press to reprint the book, demonstrating his awareness of the significant new role of the modern printing press in a changing China.

In 1920, the Commercial Press in Shanghai was at the forefront of the enterprise of reprinting Chinese classics. Publishing had flourished in China since the Sino-Japanese War in 1894–95. Between 1895 and 1898 alone, thirty journals were established in China, with Liang Qichao’s Shiwu bao (Current affairs) as one of the most influential. Liang Qichao continued his publishing endeavors while in exile in Japan from 1898 to 1912, and brought out influential journals such as Qingyi bao (The China discussion) and Xinmin congdao (New citizens journal). Reform literature in late Qing China was centered generally on three areas—the reinterpretations of Chinese classics, a revival of Buddhist scholarship, and the introduction of Western books—all of which relied on speedy and high-quality printing. The Commercial Press was a private printing workshop set up in 1897 by Chinese typesetters who had acquired modern printing skills in Western presses, but it was Zhang Yuanji (Chang Yuan-chi, 1867–1959) who gave the Commercial Press a prominent role in China’s cultural reforms. Serving the Qing court after his successful civil service examination (jinsbi) in 1892, Zhang supported Liang Qichao by advising the young emperor Guangxu to embark on sweeping
changes during the Hundred Days’ Reform in 1898. Although he was not persecuted, unlike Kang Youwei and Liang Qichao, after the conservative backlash, he nevertheless banished from the Qing court. After Zhang joined the Commercial Press in 1902, he developed it into one of the leading Chinese publishers of the twentieth century through his sound scholarship, astute political instinct, and extensive intellectual connections. Many of its programs were maintained by Wang Yunwu, who was self-taught with a gift for language and an impressive command of modern knowledge. It may be argued that in the 1920s the Commercial Press was as influential on reform in south China as Peking University was in the north.33

In the late 1910s, the Commercial Press acquired the technology of photolithography, and Zhang began an ambitious program of reprinting the Chinese classics, first from the collection at the Commercial Press, which he had built up over ten years, and second, starting in 1919, the Siku congkan series, a condensed version of the enormous imperial library, the Siku quanshu, comprising some thirty-six thousand volumes of literary treasures from the past assembled at the order of Emperor Qianlong in the 1770s. By 1922, the press had published about twenty-one hundred volumes in this series.34 For Zhang, the critical and commercial success of the venture compensated to a certain degree for the failure of the Hundred Days’ Reform. In this context, the 1920 reprinting of the Yingzao fashi by the Commercial Press under Zhang was far from an antiquarian enterprise, but part of an intellectual endeavor to make past Chinese achievements relevant in the face of a crisis of nationhood.

Zhu’s preface to the 1919 reprint of the Yingzao fashi reflected his objections to the divide between dao and qi and his call for better knowledge of traditional construction in China (Figure 3). Zhu argued that the separation between thought and practice (daqiqifente) in China, a “revisionist” (bengyi) notion held since the late Zhou dynasty (East Zhou dynasty, 770–256 B.C.E.), had resulted in the keeping of poor building records, despite the fantastic literary descriptions of great construction projects dating from earlier periods.35
He stressed that there was a lack of documentation of the art of building in China, and incomplete knowledge on the part of the craftsmen. Ironically, though the neglected history of construction had led to an overwhelming Western influence in China, Western visitors admired the exquisite craft of Chinese buildings, and sought to emulate the “oriental style.” Zhu lamented that a tradition of thousands of years had come to such a poor end, and censured Chinese scholars, as well as Chinese craftsmen, for their negligence. The discovery of the Yingzao fashi could, to some extent, restore the dying knowledge of Chinese architecture. The first section of the book, which explains technical construction terms of the Northern Song dynasty, could be seen, Zhu claimed, as the earliest example of an engineering dictionary. He hoped that Chinese architecture would one day stand side by side with Western architecture, and thanked the provincial governor profusely for its efforts in the reprinting of the manual. While overjoyed with the discovery of the Yingzao fashi, Zhu realized that his prized volume had been transcribed many times since the Song-dynasty original, and he hoped that better copies of the drawings would be found so the images could be re-created with “today’s proportional drafting method.”

The Yingzao fashi Made “Good”

Between 1920 and 1921, Zhu was sent by Xu Shichang, Zhu’s political patron and, by then, president of China, to collect an honorary doctorate from the University of Paris on his behalf, making a grand tour of America, Europe, and Japan on the way. This honor was tied to a request by the University of Paris for a copy of the Siku quanshu, because of this connection, Zhu paid special attention to books throughout the trip. Although unable to read any Western languages, he was impressed by the architectural publications in the countries he visited, seeing that conservation of old buildings and new constructions were thoroughly documented with specialized texts and extensive drawings. His firsthand experience of architectural research in America, Europe, and Japan injected a fresh sense of urgency in his work on the Yingzao fashi. He resolved to bring out a new edition that would overcome the shortcomings of the version he had found, and he entrusted the task to a well-known book restorer, Tao Xiang (1870–1940).

Zhu’s choice of Tao reflected a commitment to an established tradition in Chinese scholarship: the restoration of classics, and the philological rigor associated with it, which reached its height of achievement in the late Qing period. Throughout Chinese history, the survival of the classics had been a precarious journey. Wars, robberies, floods, fires, insects, and human carelessness all contributed to enormous losses of printed books. Official collections were particularly vulnerable when a dynasty fell. It is, therefore, largely due to the private collections of books, and, in particular, the tradition of reproducing books, that many of the Chinese classics are available today. Book reproduction in China was carried out by hand and by woodblock printing. Transcription was done either by straightforward hand-copying (shaoben) or by handtraced copying (yingshaoben) on translucent paper to preserve the style of the original. Woodblock printing was invented in the Tang dynasty (618–907) as a way of relieving the arduous and time-consuming labor of transcription, and to minimize human error. Made using blocks cut from the commonly available pear, date, and willow trees, woodblock prints were either standard (keben) or traced (yingkeben), the latter created by tracing the original on translucent paper and pasting the copy on woodblocks to be carved. In some cases, the original was destroyed when taken apart and pasted on the woodblocks for carving. In the early twentieth century, great value was accorded to original books of the Song dynasty, a period of huge output of high-quality books, marked by excellent paper, clear printing, elegant calligraphy, and even fragrance. Important though it had been for the Chinese intellectual tradition, the transcription and printing of classics presented countless occasions for errors and distortions of the originals. Intertwined with book collecting and copying was a long tradition of restoring classic texts, which attempted to overcome the mistakes of scribes and printers. The process involved collating all versions and editions, checking internal inconsistencies and factual errors, studying the contexts, linguistic trends, transcription styles, and printing and paper technologies. For instance, characters coinciding with those in the names of emperors were avoided, usually replaced with abstract strokes, whose placement could be used to identify the dates or periods of publication. Once the checking was complete, celebrated calligraphers were invited to write on the woodblocks to be carved and printed, and the reprinted classics were then regarded as “good copies” (shabens). All these activities were usually documented in postscripts (ba), and enormous intellectual prestige was associated with the entire enterprise. Most well-known collectors were also renowned for their skills and knowledge of restoring “good copies” of the classics.

The broader intellectual implications of this practice arise from a school of philological scholarship dating to the seventeenth century known as evidential research (kaobeng or kaoju). Conducted as a form of scrupulous textual analysis of internal inconsistencies and factual errors and enabled
by mastery of vast amounts of information, this form of philological scholarship constituted an important pillar of the Chinese intellectual tradition for many centuries. In paying homage to classics as the substance of a tradition, this scholarship, since the height of its achievement in the eighteenth century, reaffirmed a profound respect for “timeless” authenticity coupled with a deep sense of filial piety. In the era of reform, the philological rigor inherent in this tradition was given a new meaning. Since the Opium War of 1839–42, reformers saw in evidential research both a method of inquiry and the rise of an important trend. Kang, founder of the so-called New Text school, was able to use this approach to pronounce Confucius a “reformer” and thereby to justify his own reform ideas, and Liang Qichao, in his “Outline of Qing Scholarship,” saw this practice as comparable to that of philology and textual criticism centered on Greek and Roman antiquity in Renaissance Europe. For Liang Qichao, and even for advocates of a “new culture” such as Hu Shi, philological scholarship remained central to a sense of valued “Chinese-ness,” but they also realized that the practice of “timeless” affirmation, as I shall discuss later, must be reconceptualized with a different framework of time and space.

As Zhu’s contemporary, Tao Xiang exemplified the practice of traditional philological scholarship. Like Zhu, he had connections with Yuan at the start of his career. If Tao did not distinguish himself in politics, he was outstanding as a book collector. His holdings in Tianjin, called Sheyuan, numbered more than three-hundred-thousand volumes by 1931, but his true reputation rested on the high quality of his restorations of classics. In addition to textual research, Tao took great care with the style of calligraphy and the quality of paper and ink chosen, and ensured that the format and cover design harmonized with the book’s original appearance. In inviting Tao to be the restorer, Zhu aspired to produce a woodblock “good copy” comparable to the Song dynasty original. However, despite the involvement of this master, it is important to understand Zhu’s restoration of the Yingzao fashi as an enterprise of reform; a construction manual was not highly regarded by traditional philological scholarship, and the restoration and reconstitution of construction drawings (jiehua), which was alien to the respectable calligraphy and painting (shubua) practiced by the gentry-literati, was also unusual in this context.

With diligence, and with the assistance of several highly regarded book collectors, Tao set out to collate all available copies of the Yingzao fashi. The first printing of the book, as mentioned above, was in the North Song dynasty in 1103. The dynasty was destroyed by the invasion of the Ruzhen, a nomadic tribe from north China, and the capital, Kaifeng, was burned down by the invading troops. When the Northern Song court retreated to the south to found the capital in Lin’an (Hangzhou), a new edition was printed in 1145. The 1103 “Zongning” edition does not seem to have survived intact, and all extant versions are copies of the 1145 “Shaoxing” edition. Zhu’s discovery in the Jiangnan Library came from the Ding brothers (Ding Shen, d. 1887, and Ding Bing, 1832–1899) and their famed collection, Baqianjuan Lou. This copy, the so-called Ding brothers’ copy, was a traced transcription of a much earlier traced transcription; the ultimate source may be a transcription from the Ming dynasty (1368–1644) based on the “Shaoxin” edition.

The Ding brothers’ copy, which was reprinted in 1920 by the Commercial Press, was checked meticulously against three versions in the Qing imperial library, the Siku quanshu, and several other recently discovered copies; specifically, Tao and Zhu used newly found sheets from the 1103 (Figure 4) and the 1145 (Figure 5) editions as the source for their Song-dynasty calligraphy and printing style. As Zhu mentioned in his preface to the 1919 photolithographic reproduction, one of the most important tasks for a new edition was to improve the quality of the drawings. For the 1925 edition, this was achieved in three ways. First, in order to obtain a finer resolution of lines, the illustrations in the Ding brothers’ copy (Figure 6) were redrawn at twice the original size, and reduced photographically (Figure 7). Second, Zhu employed a master builder of the imperial palaces in Beijing, He Xingeng, to re-create the drawings of the structural timber in chapters 30 and 31, annotated with contemporary terms in red (Figure 8), believing that there was a sufficient lineage of construction methods stretching back to the Song period. Appended to the drawings in the Ding brothers’ copy, these new drawings would, Zhu hoped, in some way redress scribes’ and printers’ distortions over the centuries. Third, the colors of the painted decorations in chapters 33 and 34, which appeared as black-and-white patterns with annotations in the Ding brothers’ copy, were reproduced with more than ten colors used for some pages (Figure 9).

The new edition of the Yingzao fashi published in 1925 was exquisite (Figure 10). Bound into eight volumes with silk thread binding, it exemplifies the scholarly tradition of restoring classics, with its erudite preface and postscripts, demonstration of philological scholarship, completeness of chapters, sections, texts, and drawings, and imitation of the Song-dynasty calligraphy and printing style. It attracted the attention of many scholars in Chinese art and architecture throughout the world. Following Paul Demiéville’s learned
paper on the 1920 reprinting. Perceval Yetts wrote an admirable introduction on the 1925 publication in the Bulletin of the School of Oriental Studies, calling the volumes “triumphs of book-production.” Arnold Silcock considered the Commercial Press to be “far-seeing” in reprinting such a high-quality publication in 1929. It established Zhu as a leader of architectural research in China: Hussey called him “one of China’s greatest living architects.” When the Chinese Council of the Institute of Pacific Relations published an English-language volume on Chinese culture as the focus of discussion for its 1931 conference in Shanghai, Zhu contributed an essay on Chinese architecture. This was an extraordinary demonstration of recognition for Zhu, since his paper was next to those of prominent Chinese scholars such as Cai Yuanpei (Tsai Yuan-p’ei), Hu, and Ding Wenjiang (V. K. Ting). Entitled “Architecture, A Brief Historical Account Based on the Evolution of the City of Peiping,” Zhu’s essay surveys Chinese cities from 255 B.C.E., using results of his textual research and his observations on the city of Beijing. The wealth of the literary sources Zhu was able to gather testifies to his scholarship, but they were often inaccurate, unsubstantiated by concrete documentation. The state of architectural knowledge in China was soon to change.

The Yingzao fashi as a Document of Chinese Architectural History

By 1930, the study of the Yingzao fashi entered a new stage. This shift was linked to two events. First, Zhu was able to raise sufficient funds to set up a research center, the Society for Research in Chinese Architecture, and to hire paid researchers. Second, the first Chinese architectural students who studied in Europe, America, and Japan were returning to China. Three of them drew Zhu Qiqian’s attention: the couple Liang Sicheng (Liang Su-ch’eng, 1901–1972) and Lin Huiyin (Phyllis W. Y. Lin, 1904–1955), who returned from the University of Pennsylvania in 1928, and Liu Dunzhen (Liu Tun-tseng, 1897–1968), who returned in 1922 from Tokyo after nine years of study, first in high school and then in the architecture department of Tokyo Polytechnic. Zhu had long-standing personal connections with Liang Sicheng’s father since they both served in Yuan’s government as ministers in 1913, and Liu caught Zhu’s attention with several publications on Chinese and Japanese architecture.

The intellectual framework that fostered a new approach to the research on the Yingzao fashi can perhaps best be understood through the historiographical thinking of Liang Qichao, a central figure in the 1898 Hundred
Figure 6 From chapter 30 of the 1919 photolithographic reprint of the Ding brothers’ copy of the Yingzao fashi: “Structural Carpentry,” four-tier to six-tier bracket sets

Figure 7 From chapter 30 of the Yingzao fashi, 1925 edition: the redrawn illustration “Structural Carpentry,” four-tier to six-tier bracket sets
Figure 8 From chapter 30 of the Yingzao fashi, 1925 edition: a new drawing commissioned by Zhu showing Qing-dynasty methods comparable to those used in the Song dynasty to make four-tier to six-tier bracket sets.

Figure 9 Painted decorations in the Yingzao fashi, 1925 edition.
Days’ Reform. Liang Qichao, unlike Zhu and Tao, was an exceptionally farsighted thinker; in many ways, he exerted a profound influence on Liang Sicheng.\(^{55}\) To Liang Qichao, the modesty of the success and the ultimate failure of the “self-strengthening” of the Qing court demonstrated the limits of their thinking. Being modern did not mean being able to manufacture guns and operate canons; modern weapons were the outcome of a particular way of thinking. That intellectual framework, the core of modernity in Liang’s mind, was predicated on the idea of modern knowledge, that of nations, cultures, geographies, and histories, carefully crafted with strict standards of clarity, accessibility, and precision. History held a particular fascination for Liang Qichao. Perhaps the intellectual conditions in China suggested to him an ultimate irony: so much literary heritage weighed down on him with so little perspective to make sense of it all. He came to this understanding through his readings of, among others, Francis Bacon and René Descartes, the “founding fathers” of modern European civilization. History’s association with the concept of scientific fact as a way of understanding change and explaining differences, as outlined in the works of Immanuel Kant and G. W. F. Hegel, gave Liang Qichao a strong belief that China’s future as a modern nation-state partly depended on developing a modern historiography. He advocated a “new historiography” \(^{(xinshixue)}\) (1902), and proposed conceptual and technical methods (1922 and 1926–27) to advance “specialized histories” \(^{(zhuanshi)}\), including that of architecture.\(^{56}\) Liang Qichao and Liang Sicheng exchanged letters regarding the son’s wish to carry out doctoral research on Chinese palaces at Harvard University that confirm the father’s regard for architectural history.\(^{57}\)

In the 1920s, the European Enlightenment tradition that Liang Qichao first encountered through Japanese sources and hoped to establish in China through his writings on historiography had already had a considerable impact on research in Chinese architecture. Japanese architectural scholarship had undergone decisive changes in the late nineteenth century, when Chinese-influenced “evidential research” gave way to a Western-influenced modern historiography. One of the most outstanding of the figures who effectuated this change is Ito Chūta (1867–1954), who conducted a groundbreaking study of the Hōryū Temple (607) in Nara, the earliest surviving timber structure in the world, and who largely established modern architectural research in Japan. Ito’s research had two important motivations—an archaeological approach and nationalism—both profoundly shaped by the works of Western architectural scholars such as James Fergusson (1808–1886), whose two-volume publication \textit{History of Indian and Eastern Architecture} (1876) exemplified a strong tendency toward what he called an “archaeological science”: “My authorities . . . have been mainly the imperishable records in the rocks, or on sculptures and carvings, which necessarily represented at the time of the faith and feelings of those who executed them, and which retain their original impress to this day.”\(^{58}\) Fergusson’s influence on Ito perhaps explains why the latter did not conduct research on the \textit{Yingzao fashi} when he knew as early as 1905 that a \textit{Siku quanshu} copy existed in Shenyang (Moukden); he considered it difficult to read and lacking in scientific basis.\(^{59}\) At the same time, Fergusson stated that Chinese architecture and, as he was later to claim, Japanese architecture, exemplified people’s “never thinking of any of those higher modes of expression” of great architectural monuments.\(^{60}\) Fergusson’s claims and Sir Banister Fletcher’s classification of Chinese and Japanese architecture into “non-historical” styles drew sharp critical responses from Ito.\(^{61}\) Beginning in 1901, Ito made several important field trips to China, completed measured drawings of the Forbidden City and published them in 1903, giving a different assessment of Chinese architecture.\(^{62}\) Chinese design, Ito argued, was more vigorous than the other two systems of Asian architecture, the Indian and the Muslim. Western scholars, Ito thought, formed their prejudices due to ignorance of Chinese history and culture as well as the difficulties of gaining access to the country’s interior.

Sekino Tadashi (Sekino Tei, 1868–1935), Tokiwa Dairo (1870–1945), and others quickly followed Ito’s lead by traveling to China and researching its architecture, but their
nationalist sentiment was soon fused with Japan’s colonial ambitions in northern China (Manchuria) and other parts of Asia. The effective development of a nation-state based on Western models since the Meiji period also led Japan to emulate territorial expansions of the Western powers, and government interest increased in the research on Chinese culture. The Far Eastern Archaeological Society (Toa-kokoku-kwai), for instance, was funded by the Japanese government with China’s war reparations; the archaeological surveys of ancient cities in northern China that it conducted between 1927 and 1945 were greatly enabled by the Japanese occupation of Manchuria. With funding and support, the Japanese scholars quickly surpassed Western scholars such as Boerschmann and Osvald Sirén. The Japanese research had a profound influence on the Chinese scholars for two reasons: they shared a critique of the Eurocentric view prevalent in architectural history at the time, and they advanced field and textual research due to their linguistic affinities with China. Around 1930, Zhu, through his close associate Kan, sought possible collaborations with Itō and Sekino, who became the founding members of Zhu’s Society for Research in Chinese Architecture. But the Japanese occupation of Manchuria in September 1931 ended all hopes of collaboration.

In the same month, Liang Sicheng left the Japanese-occupied Shenyang, where he had founded a department of architecture at the National Northeastern University and had been teaching since 1928, for Beijing to join Zhu’s Society for Research in Chinese Architecture. Lin was already in Beijing for medical treatment, and Liu joined the society in the following year. They formed an able research team, with a much better understanding of the intellectual roots of the Japanese researchers than Zhu and Tao. While Zhu and Tao were brought up in deep-rooted Confucian traditions that stressed memorization of classics, formulated for the civil-service examination, the younger researchers were products of a far more cosmopolitan environment. Liang Sicheng, for instance, went to an Anglican school in Beijing, and between 1915 and 1923 studied at Tsinghua College, which was modeled on American high schools for the purpose of preparing pupils for further education in American universities. The difference between these two educational experiences cannot have been more profound and far-reaching. Tsinghua College immediately immersed Liang Sicheng in a view of humanity and knowledge based on principles of liberalism, individualism, and standards of modern intellectual inquiry. This exposure may explain why Liang, while studying architecture in Pennsylvania, was perhaps more prepared to read the architectural treatises of Vitruvius and Andrea Palladio than to see the 1925 edition of the Yingzaofashi sent to him by his father. The exquisite reprinting of the Yingzaofashi, a superb example of Tao’s craft deeply rooted in the tradition of Chinese scholarship, appeared to Liang as inaccessible texts and inaccurate drawings, or, to paraphrase his description, an incomprehensible book from heaven (tianshu). Liang was, of course, no longer speaking from a traditional Chinese scholar’s paradigm of a “good copy,” but from architectural knowledge founded on modern principles, and on graphic conventions that came with his Beaux-Arts education under the guidance of Paul Cret. Liang was later to note that the drawings in the Yingzaofashi were inconsistent in format, lacking in the concept of scale, inadequately annotated, and insufficient in differentiating line types.

Equally important, in Cret’s Beaux-Arts view of education, history was central to the study of architecture. Precise understanding of historical precedents was fostered through meticulous examination of the past and its buildings. This emphasis on precedents may be traced back to the Renaissance documentation of Greek and Roman antiquity, which became one of the central tenets of the Beaux-Arts tradition. The winner of the Prix de Rome, the pinnacle of student achievement, was not given an opportunity to design anew, but to survey and document a work of antiquity.

The epistemological shift from Zhu and Tao to Liang Sicheng, Lin, and Liu materialized first of all in the conceptualizing of the Yingzaofashi. The 1925 edition fundamentally saw the book as a “timeless” text made good, with no real historical space between the original and its restoration. The move to redraw the illustrations of structural carpentry demonstrated Zhu’s and Tao’s traditional notion of the didactic value—reformist or traditional—of a textual artifact frozen in time. Liang, Lin, and Liu, by contrast, combined traditional philological rigor with a program of field research in their studies on the Yingzaofashi. A copy of the 1145 edition discovered in the Forbidden City in 1932 contained an important passage in chapter 4 that had been missing from all other copies, including Zhu’s 1925 edition. But their field research marked a true advance. In order to understand the Song-dynasty drawings of the structural carpentry, and their associated obscure and archaic terms, the researchers first studied the more readily accessible sites of the Qing-dynasty buildings; this led to the publication in 1934 of Liang Sicheng’s book on Qing construction methods, Qingshi yingzao zeli, a milestone for research in Chinese architecture (Figure 11). In it, Liang presented Qing-dynasty architecture with precision and clarity via the arrangement of texts, photographs, and accurate drawings (Figure 12), and a literary style more readable than the clas-
ysical Chinese that most scholars still employed. Liang’s understanding of Qing architecture came from the Qing construction manual issued by the imperial court, *Gongbu gongcheng zuofa zeli* (1734), the living knowledge of artisans of his time, and the compilation of calculation methods (suanli) developed by different artisans to make up for a lack of generic calculation methods in the Qing manual. Liang’s outstanding achievement in this book forms a dramatic contrast with a history of Chinese architecture by Le Jiazaı, published a year earlier, in 1933 (Figure 13), in which the author displayed little understanding of factual precision, modern graphic conventions, or the need to build his work on established knowledge of Chinese architecture.67

The historical outline of Chinese architecture that Lin contributed to the beginning of Liang Sicheng’s book revealed how far the younger researchers had advanced in their understanding of the *Yingzao fashi* within a “historical development” of Chinese architecture. Crucial to their research were several field trips into the rural areas of north-

Figure 11  Cover of Liang Sicheng, *Qingshi yingzao zeli* (Beijing, 1934)

Figure 12  Illustration 6 in Liang Sicheng, *Qingshi yingzao zeli*
ern China that led to groundbreaking discoveries, despite the muddy roads, unreliable transportation, threat of bandits, and lack of basic hygiene. The first and undoubtedly most significant of these journeys was Liang Sicheng’s expedition in April 1932 to document the main hall and the gate (both dated 984) of a Buddhist monastery, Dulesi, located between Tianjin and Beijing and discovered by Sekino a year earlier. The report, published in 1932 in the Bulletin of the Society for Research in Chinese Architecture, not only revealed the earliest surviving timber structures in China discovered to date, but also set new standards for research in Chinese architectural history through precise, thorough documentation and description of the temple. Parallel with Liang’s work at Dulesi, Liu measured the main building, Rulai Hall, of the Buddhist temple Zhihuasi (1444) and published a report in the same year. Based on these field trips and knowledge from literary sources, Lin’s 1934 introduction to Liang Sicheng’s Qingshi yingzao zeli speaks, with a reasonable amount of evidence, of the “system” of Chinese architecture and its historical changes from the “vigorous” Tang style, through the “mature” Song style, to the “regressive” and “rigid” Ming and Qing style, with the Yingzao fashi marking a transition between the Tang and Ming-Qing periods. The research also allowed Liang Sicheng to use the term “grammar” to describe the rules of traditional Chinese timber construction.70 These views were to play a crucial part in the histories of Chinese architecture that Liang wrote in the 1940s.71 A string of other expeditions followed. In 1937, Liang Sicheng and Lin came across perhaps their greatest find, the main hall of the Buddhist temple Foguangsi (857) in Shanxi, the earliest and largest timber building in China. Less than 10 percent of the survey materials collected between 1932 and 1937—over twenty-two hundred “units” of studies in more than two hundred counties—was published by 1947.72

At the height of its activities, the society mounted an impressive show as part of an architectural exhibition in Shanghai in 1936,73 with more than ten models, sixty drawings, and three hundred photographs documenting recently discovered ancient buildings. Also on display were Liang Sicheng’s Qingshi yingzao zeli and the Bulletin of the Society for Research in Chinese Architecture, a publication described by Joseph Needham as containing an “enormous mass of information . . . indispensable for anyone wishing to penetrate beyond the surface of the subject.”74

With such impressive work from the society, Ito’s and Sekino’s insistence that Japanese scholars were best positioned to study Chinese architectural history began to fade.75 Our knowledge of Chinese architecture and the Yingzao fashi today owes a fundamental debt to the research accomplished between 1930 and 1937 by the Society for Research in Chinese Architecture.

Proletarian Culture and the Yingzao fashi

The annotation of the Yingzao fashi, which would have followed Liang Sicheng’s work on Qing architecture and the field trips, was seriously interrupted by the Japanese invasion of China from 1937 to 1945. The society moved to southern China to continue research and writing, without funding or stability, and Liang Sicheng, assisted by Mo Zongjiang, completed the annotation of the first five chapters of the Yingzao fashi, with all the corresponding drawings redrawn according to modern graphic conventions. Following the Japanese surrender, Liang was exclusively pre-
occupied with the founding of the department of architecture at Tsinghua University, and Liu had already left the society in 1943 for a paid teaching position in Nanjing.

More significant, the prestige of the Yingzao fashi in China suffered a serious setback as the Communist movement’s view of culture gained influence after the war. Coming from a much more radical intellectual framework than that of the Qing “self-strengthening,” Zheng’s advocacy of industrial developments, Liang Qichao’s intellectual reform, or the nationalism of the republican era, the Chinese Communist movement owed its views of the Chinese national reemergence to the May Fourth Movement.76

Shortly after Zhu excitedly examined the pages of the Yingzao fashi at the Jiangnan Library in 1919, Liang Qichao was in Paris as an unofficial observer, watching another chapter of Chinese politics unfold. At the end of World War I, with the signing of the Versailles Treaty, which transferred all the rights of German territories in Shandong Province to Japan, Liang Qichao sent a telegram to China on 1 May 1919 that helped spark the student protests of 4 May. For over a century, with each political and military disaster in China—the Opium War in 1839–42, the Sino-Japanese War in 1894–95, and the failure of the Hundred Days’ Reform in 1898—Chinese intellectuals had grown ever more radical. The generation of the May Fourth Movement, to the dismay of Liang Qichao, advocated the complete abandonment of Chinese traditions. This attitude gave strength to the Marxist idea of cultural “ideologies” as inherent to societies founded on different modes of material production, and social improvement induced through ideological change, which satisfied a desire for new ideas in China. The notion of a new culture, rather than the renewal of traditions, began to gain ground with intellectuals such as Chen Duxiu and Li Dazhao. Following the founding of the Chinese Communist Party in 1921 in Shanghai, this new culture became associated with a “Chinese proletariat culture” and its corresponding Chinese socialist state, a concept the intuitive Lin found to be “nonsense”: “Good literature is good literature regardless of the ideology of the people.”77 The victory of the Communist forces over the republican government, and the founding of the People’s Republic of China in 1949, ensured intense explorations of versions of the “Chinese proletariat culture.”

A reassessment of the Yingzao fashi, and indeed the achievements of the Society for Research in Chinese Architecture, resulted from the cultural policies that emerged in the early 1940s in Yan’an, where the Chinese Communist Party regrouped after the Long March in 1934–35. The formation of a Communist cultural policy was part of a much larger endeavor to ensure party discipline in 1941–42 known as the Rectification Campaign (Zhengfeng); it was largely instigated by Mao Zedong following his rise to leadership of the Chinese Communist Party after the Zunyi conference, in which he sharply criticized the miscalculations that led to the loss of vast Soviet areas in south China. The Rectification Campaign was immensely significant for China in its definition of class struggle and in its method of mass campaigns, in which the act of “self-criticism” under peer pressure formed a key element. An avid poet himself, Mao took charge of the task of disciplining intellectuals and artists, which by then numbered between six and seven thousand,78 with many prominent figures, among them Ding Ling, traveling to Yan’an from large cities such as Shanghai. In May 1942, Mao framed the discussion by requesting that they discuss the role of their works as a “revolutionary force,” and asking that they identify themselves with the proletarian classes (workers, farmers, soldiers) and become loyal to the Chinese Communist Party. Summarizing a series of discussions, Mao claimed that literature and art could never be free of classes and class struggle, and that intellectuals and artists must serve the proletariat with new cultural forms, not the bourgeois or petty bourgeois with old cultural forms.79 The impact of this “artistic rectification” was dramatic: Western classical culture and traditional Chinese art forms gave way to folk music, painting, and dance with themes of heroic anti-Japanese and anti-nationalist struggles, which were well received by the local population in rural areas in northwest China.80 Mao’s “Talks at the Yan’an Conference on Literature and Art” in 1942 remained a defining document for a good part of Chinese cultural policy, radical and moderate forms of which survived well into the 1980s.

Within this class-oriented cultural framework, the Yingzao fashi was seen to be in the service of a “feudal” imperial administration, and the research conducted on the Yingzao fashi under the leadership of Zhu was regarded as a reflection of “bourgeois interest and knowledge.” After his active participation in the planning of Beijing in the early 1950s, in which his ideas of conservation clashed constantly with grand visions of the new regime, Liang Sicheng suffered humiliation and hardship during bouts of fanatic mass campaigns to “weed out” feudal and bourgeois cultures, partly because of his research on the Yingzao fashi. The most consistent charge levied against him starting in the late 1950s was “bourgeois scholarly authority.” A rare window of opportunity to work on the Yingzao fashi opened in 1956 under an initiative by the State Department to “advance to science.” Liang Sicheng led a history and theory group at the architecture department of Tsinghua University, and continued the field research in northern China cut short by
Daiheng, continued to publish research on the manual, expanding the discussion of the modular system to parts of Song-dynasty buildings not explicitly mentioned in it, and to plans of groups of structures.

The vicissitudes of the *Yingzao fashi* in early-twentieth-century China are not just a curious tale of a rare book. Like the Renaissance and eighteenth-century editions of Vitruvius's *Ten Books of Architecture* and Palladio's *Four Books of Architecture*, the editions of the *Yingzao fashi* made in early-twentieth-century China are intertwined with deep architectural and cultural changes that permeate other aspects of architectural production. The book became an important element in the concept of a Chinese architecture, which figured prominently in Zhu's critique of the traditional divide between *dao* and *qi*, his promotion of industry and commerce in China, and his advocacy of research in Chinese architecture. Instead of affirming the significance of seminal scholarly Chinese texts, the traditional philological scholarship Tao employed gave the *Yingzao fashi* an anchoring role in the early-twentieth-century exploration of a new Chinese architecture. The subject provided a central focus for Liang Sicheng, Lin, and Liu in their attempt to develop a history of Chinese architecture; and Liang Qichao became an ardent spokesman for the modern historiography that informed much of their intellectual framework, and guided their field research, their study of historical documents, and their conceptualization of historical development and change. The research conducted in the 1930s at the Society for Research in Chinese Architecture broke new ground in understanding the development of Chinese timber structures in different periods in China's past, and mirrored a profound intellectual transformation of space and time in early-twentieth-century China. This transformation is part of what Liang Qichao, Hu, and Liang Sicheng described as "the Chinese renaissance." Toward the latter half of the century, the decline of interest in the *Yingzao fashi* was inextricably linked to the Marxist ideology of class and culture, and a Chinese Communist cultural policy that was first developed in Yan'an in the 1940s. In early-twentieth-century China, the *Yingzao fashi* became a revealing measure of change in the country's continuing endeavor to reconstitute its building tradition and to develop its architectural profession and discipline in a much wider context of political and cultural change.

Notes
1. The development of Shanghai, one of the most prominent treaty port cities, is discussed in Wu Jiang, *Shanghai hainian jianzhusi*, 1840–1949

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*Figure 14* Illustration of structural carpentry in Liang Sicheng, *Yingzao fashi zhushi* (Beijing, 1983)

the Sino-Japanese War in 1937. The research came to a stop when another rectification campaign and the Anti-rightist Campaign began in 1957–58. A similar opportunity came in 1961, and by mid-1963, Liang Sicheng and his assistants had finished annotating half of the *Yingsao fashi*. Stalled again by the Great Proletarian Cultural Revolution (1966–76), a more fanatic and cruel version of the Yan'an cultural rectification, publication of the first half of an annotation of the *Yingsao fashi* was finally accomplished in 1983 (Figure 14), more than ten years after Liang Sicheng's death. While it was difficult to work on the book in China, Japanese scholars continued to build on their early-twentieth-century contacts with Chinese scholars. Perhaps the most complete annotation today is Takuichi Takeshima's three-volume *The Study of the Ying Tso Fa Shih*, published in Japanese in 1970. Assistants to Liang Sicheng and Liu Dunzhen, such as Mo Zongjiang, Chen Mingda, and Guo.
(History of Shanghai architecture, 1840–1949) (Shanghai, 1997). For a discussion of the broader context, see Peter G. Rowe and Seng Kuan, Architectural Encounters with Essence and Form in Modern China (Cambridge, Mass., 2002); John Fairbank and Merle Goldman, China, A New History (Cambridge, Mass., 1998); and Jonathan D. Spence, The Search for Modern China (New York and London, 1990).


8. Zhu Qiqian had little hope for positive results from this negotiation, as he confessed to a close friend just before he left Beijing for Shanghai. The center of Chinese politics at the time was in neither of those cities, but in Peking, where a political settlement was being hammered out at the end of World War I which would determine the future of the German territories in China. See Peng Ming, ed., Zhongguo xianshi zhi zhai xuanji (Selected documents of Chinese modern history), vol. 1 (Beijing, 1987), 114.

9. Literally, they can be translated as “essence/utility” (ti-yong), “origin/proliferation” (ben-mo), and “way/instrument” (dao-qi).


11. An architectural curriculum based on the Japanese model was added when the Qing court tried to revive the college in 1902. Xu Subin, “Zhongguo jianzhu jiaoyu de yuandian” (The origin of Chinese architectural education), in Zhang Fuhe, ed., Zhongguo jianzhu yu yuandian yanjiu (Research and conservation of modern Chinese architecture) (Beijing, 1999), vol. 1, 207–20.

12. Liang Qichao, “Ouyou xinying lu” (Impressions of travels in Europe), in Liang Qichao yuandian (Complete works of Liang Qichao), 10 vols. (Beijing, 1999), 2968–3048.


17. Cody, Building in China, 34–85 (see n. 3).


19. One of the most puzzling features of the Qianmen project was the addition of platform and white plaster moldings over the existing gray bricks of the outer gate building. According to Oswald Sirén, who obtained drawings from Curt Rothekegel for his book The Wall and Gates of Peking (London, 1924), the Chinese side altered Rothekegel’s designs with regard to detailed decorations. Zhu’s own account of the project mentions “improvements” on “inappropriate features of old buildings,” in “Xigai Jingshi qiansanmen chengyu gongcheng cheng” (Report on the renovation of the walls of the three front gates of Beijing), in Ye, Huogong jishu, 17–18.

Sirén described the new additions as “one of the most deplorable features” of this project; quoted in Warner, German Architecture in China, 28.

20. Warner, German Architecture in China, 34.


22. Ye, Huogong jishu, 127.


27. See Rowe and Seng, Architectural Encounters (see n. 1).

28. Spence, The Search for Modern China, 179 (see n. 1).


32. Ibid., 184–211.


36. For instance, Hussey consulted Zhu many times on details of Chinese architecture, sources of labor, and sourcing of traditional building materials such as the glazed roof tiles for Peking Union Medical College. Zhu, in turn, had a high regard for Hussey’s work. See Hussey, My Pleasures and Palaces, 229, 238 (see n. 18).

37. Zhu Qiqian, preface to Shiyou Song Li Mingzhong Yingzao fashi (A photolithographic reprint of the Yingzao Fashi by Li Mingzhong of the Song Dynasty) (1919).

38. “Today’s proportional drafting method” (jin jiehua bili zhifei) probably refers to the scaled and orthographically projected drawings he must have seen during his contact with German engineers and architects. Hussey
observed that Zhu was proficient in reading modern architectural drawings when he examined the drawings of the Peking Union Medical College in 1918. Hussey, My Pleasures and Palaces, 229.

39. Zhu, preface to Li Mingzong Yingzao fanshi.


41. Li Zhizhong, Gaoxh xubenxue gailan (Outline of the study of antique books) (Beijing, 1990), 14.

42. Ren, Zhongguo congshulou, 150–65.

43. It is also worth noting that meaningful academic debate between representatives of different “lineages” of scholarship was difficult because of the element of Confucian filial piety. Yeh, The Alienated Academy, 22–48 (see n. 2).

44. Liang Qichao, “Qingdai xueshu gaiquan” (Outline of Qing scholarship), in Liang Qichao quanji, 3066–109.

45. Ren, Zhongguo congshulou, 1700–1708. Lin, Konkai Lu Ban de damen, 139 (see n. 24).


48. Tao Xiang, “Shiyu” (Editor’s notes), Li Mingzong Yingzao fanshi 8 (see n. 55).

49. Demièville, “Che-yin Song Li Ming-tchong Ying tsa fa che.”


51. Hussey, My Pleasures and Palaces, 229 (see n. 18).


53. These publications were Liu’s “Foijao diyu Zhongguo jianzhu zhi yingxiang” (Buddhist influence in Chinese architecture), Kexe (Science) 13 (1928); translations and annotations of Hamada Kosakado’s “Horyuji and the Architecture of the Han and Six Dynasties in China” (1931); and Tanabe Yasushi’s “The Architectural Significance of the ‘Jade Cabinet’ in Horyuji.” All were reprinted, with changes made by the editors, in Liu Dunzhou, Liu Dunzhou wenji (Collected writings of Liu Dunzhou), 2 vols. (Beijing, 1982).


55. Liang Qichao, Liang Qichao quanji: Xinshixue (New historiography), 736–53; “Zhongguo lishi yanjiufa” (The research method for Chinese history), 4087–153; “Zhongguo lishi yanjiufa (lupian)” (Compendium to the research method for Chinese history), 4794–880 (see n. 12).

56. Li, “Writing a Modern Chinese Architectural History,” 43.


59. Ferguson, History of Indian and Eastern Architecture, 688. A section on Japanese architecture was added in later editions of the publication with little change to the theoretical framework.

60. Yetts, Zhongguo jianzhu shi, 7–12.

61. Xu, Riben dai Zhongguo chengzhi ya jianzhu de yanjiu, 46.


63. Xu, Riben dai Zhongguo chengzhi ya jianzhu de yanjiu, 81–98.

64. Ernst Boerschmann, Chinese Architecture (Berlin, 1925); and Sirén, The Wall and Gates of Peking (see n. 19).

65. Liang Sicheng, preface to Yingzao fanshi zhushi, 8 (see n. 5). For more on the lives of Liang and Lin, see Lin Zhu, Jianshenzhai Liang Sicheng (Architect Liang Sicheng) (Tianjin, 1996); and Wilma Fairbank, Liang and Lin: Partners in Exploring China’s Architectural Past (Philadelphia, 1994).

66. Liang Sicheng, preface to Yingzao fanshi zhushi, 11.


68. Le Jiaozao, Zhongguo jianshushi (History of Chinese architecture) (1933). For Liang Sicheng’s scathing criticism of this work, see Liang Sicheng, Zhongguo jianshushi (History of Chinese Architecture) (Hong Kong, 2000), 316.

69. The meaning of grammar is explained through the framework of “shape grammar” by Andrew 1-kang Li, “A Shape Grammar for Teaching the Architectural Style of the Yingzao Fashi” (Ph.D. diss., Massachusetts Institute of Technology, 2001).


72. Lin, Jianshenzhai Liang Sicheng, 70.


74. Xu, Riben dai Zhongguo chengzhi ya jianzhu de yanjiu, 7 (see n. 58).


76. Fairbank, Liang and Lin, 64 (see n. 66).

77. Gao Xinmin and Zhang Shujun, Yan’an zhengfeng shiblu (Documentation of the Yan’an Rectification Campaign) (Hangzhou, 2000), 218–19.

78. Mao Zedong, “Zai Yan’an wenyi zuotanhui shang de jianghua” (Talks at the Yan’an Conference on Literature and Art), in Normal University of Jilin, Wenyi jianghui zhengce xuezu ziliao (Materials for study in policy of literature and art) (Changchun, 1961), 106–34.
80. All kinds of “street culture” appeared, such as street posters, street poems, street novels; the Lu Xun Arts Academy formed a folk dance troupe (yanggedui) with 150 dancers, which traveled and performed over forty shows in Yan’an countryside in 1943. Gao and Zhang, Yan’an zhengfeng shihu, 256–57.


Illustration Credits
Figure 1. Ye, Huogong jishu, unpag.
Figures 2, 3, 6, 10. Nanjing Library
Figures 4, 5, 7–9, 11–13. Chinese Library, National University of Singapore
Figure 14. Liang Sicheng, Yingzao faoshi zhusi (Beijing, 1983), 246