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China's vernacular architectural heritage and historic preservation

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Abstract

This review article explores the trajectory of vernacular architectural documentation and preservation in China, including both notable successes and unfortunate failures. While the documentation and preservation of monuments of the past have a long-recorded history, the story of the 'discovery', documentation, and preservation of vernacular sites—individual structures as well as building complexes—is less known.

This essay presents how 'outsiders'—mainly intrepid academics within China—travelled to out-of-the-way villages and towns after 1949 to find historic structures that were known to local residents but not to the broader world, even within China. Tragically, their findings were unpublished for decades. During politically charged periods, there was an orgy of calamitous destruction of countless vernacular buildings, an astonishing loss caused by the abandonment, renovation for alternative uses, and even razing of historic residences, temples, lineage halls, bridges, and walls in both rural and urban areas. Despite these enormous losses, many *today* marvel at the abundance of seemingly 'historic' structures that are still standing. This essay examines the roots of this apparent contradiction.

Rural revitalisation has become a national issue for China in recent decades. In support of this initiative, an extraordinary amount of successful historic preservation work in villages has been accomplished. Today, unlike in the past, heritage protection focuses on broader village landscapes rather than on individual buildings. The challenges of preserving architectural sites are centred around issues of restoration versus recreation as well as redevelopment, that is, demolition followed by reconstruction. The commodification of heritage through the acceleration of tourism continues to have both positive and negative impacts. Judgements about authenticity often continue to be at odds with investors' need to recoup costs and ensure ongoing profits.

Keywords Vernacular architecture, Village architecture, Historic preservation, Architectural heritage, Heritage management, UNESCO world heritage

1 Introduction

This review highlights how architectural heritage in rural China has been documented and written about, especially since 1949. Unfortunately, fieldwork initiatives by pioneering academics were not shared outside China for decades.

With an extraordinarily rich array of architectural features that range from world-famous complexes such as the Forbidden City to small, yet old, temples in remote mountains, as well as distinctive dwellings of ethnic minority groups, China can reasonably boast of an impressive built heritage. In terms of historic preservation, notable successes and unfortunate failures have occurred over the past century as the country has documented its built heritage. The preservation of monumental structures, which are outstanding representations of the country's history and are widely known throughout the world, has been the most visible and generally successful. As of July 2024, China has 59 cultural, natural,

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and mixed UNESCO World Heritage Sites, ranking second in the world, just one behind Italy. As significant as this number is, nearly 60 other sites still wait on UNESCO's Tentative List for China, some of which have languished there since 1996.

These numbers are dwarfed by the extraordinary number of lesser known, though significant, heritage sites at both the national and provincial levels that do not rise to UNESCO World Heritage status. The recognition and preservation of these sites—individual structures, building complexes, and village landscapes—are the focus of this essay.

2 The earliest efforts at heritage documentation

Over the past 45 years, there has been an unprecedented construction boom throughout China. In an area similar to that of the United States, China's population swelled from 583 million in 1953 to nearly one billion in 1980 and now more than 1.4 billion in the third decade of the 21st century. The magnitude of these increases overwhelmed the country's supply of housing, impacting a cultural landscape that had evolved over several millennia, even leading to the construction of high-rise structures in rural areas; at the same time, the extent of villages has been expanded, and arable land has been consumed.

Moreover, partially fuelled by the fury of calamitous political campaigns such as the Great Proletarian Cultural Revolution between 1966 and 1976, many significant old residences, temples, and lineage halls, among other structures, were razed, abandoned, or renovated for alternative uses. Under the guise of 'destroying the "four olds" and establishing the "four news" (破四旧, 立 四新), the four olds being 'thought, culture, customs, and habits, a considerable amount of China's built material heritage was destroyed. As the 20th century ended and a new millennium began, a third factor arose from accelerating changes in social structures. With young men and women leaving village homes for urban jobs, there was a 'hollowing out' of traditional villages, so buildings increasingly lacked maintenance, deteriorating even to the point of ruin.

Considering all these factors—neglect, population increases, destructive political rampages, and exodus from the countryside—not only crumbling structures of little significance but also notable buildings of historic importance were lost. For far too long, deliberate actions and apathetic indifference conspired against both the chronicling and preservation of China's historic buildings of all types as well as the landscapes in which they were constructed, with unfortunate consequences. Today, this is no longer a crisis, as indifference has been replaced with zealous efforts to revitalise villages and towns.

Perhaps unexpectedly, for many people who have little sense of China's developmental trajectory since 1949, the country's landscape today has ostensibly overflowed with restored buildings representing its architectural heritage. To explain this seeming paradox, we trace the situation to 1929, when the Society for Research in Chinese Architecture was formed by Zhu Qiqian (朱启钤), who appointed Liang Sicheng (梁思成) and Liu Dunzhen (刘敦桢) as deputy directors. Both Liang and Liu, as discussed below, were key individuals in early documentation and preservation efforts. Although the published results of their work had been elusive for decades both in China and abroad, their personal influence and that of their students persisted for nearly a century.

In the 1930s, Liang Sicheng and his wife Lin Huiyin (林徽因) painstakingly documented key structures in the country's architectural patrimony that were worthy of conservation. They travelled difficult routes through 15 provinces with onsite visits and documentation of more than a thousand structures. However, war and other succeeding circumstances frustrated ongoing attention to, let alone the actual restoration of, recorded buildings. An awakening began slowly as international and civil warfare came to an end, starting from 1950 to 1980 and then accelerating. Moreover, in recent decades, the trajectory has trended beyond seeing preservation as an end in itself to recognising that care of the country's vernacular architectural heritage can be a vehicle for poverty reduction, promoting economic prosperity, and nurturing cultural nationalism.

Throughout the 1950s and 1960s, Chinese-language architectural publications included only a limited number of short articles about vernacular/folk architecture (minjian jianzhu 民间建筑). Most of the research and field work done during this period—drawings, photographs, and texts—were not published at the time. It was not until the 1970s and 1980s when this early post-Liberation work, which had been unappreciated—with much unfortunately lost—saw the light of day as the political environment began to change.

There were a few exceptions in a single year, 1957. One of these was the publication of architect Liu Dunzhen's Zhongguo zhuzhai gaishuo (《中国住宅概说》 Introduction to Chinese Dwellings), a short book that was expanded from a lengthy journal article, demonstrating the richness of Chinese vernacular architecture. Liu explained in his preface that his travels in southwestern China during the Anti-Japanese War (1937–1945) opened his eyes to vernacular architecture and that he furthered his research in 1953 after the formation of a Chinese Architectural Research Unit by the Nanjing College of Engineering and the former East China Architectural Design Company. For such a vast subject, Liu's book

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was short. Indeed, he admitted that the study of vernacular architecture in China could not be adequately performed until a countrywide comprehensive survey was conducted. Liu's concise historical summary traced the development of the Chinese house from neolithic times through the Qing Dynasty (1644–1911). His approach was less historical than morphological, categorising rural dwellings into nine types according to house shape, which were illustrated with drawings and photographs.

Although politics within China limited its circulation, Liu's book was noted in 1958 by R.T.F. Skinner in the Journal of the Royal Institute of British Architects, stating that 'it is perhaps difficult for us in Europe, where at least all the main types of domestic architecture have been studied and presented in innumerable excellent publications, to realise how important it is that this research work has been started in China. Nonetheless, by 1958, vernacular architectural study in China had essentially been halted. While an abridged translated typescript translation of Liu's book was performed by Liao Hungying, neither it nor Liu's Chinese edition found their way into libraries in the West nor played any role in preservation efforts in China. Curiously, Andrew Boyd's generously illustrated *Chinese Architecture and Town Planning*, which was published in 1962 in London and Chicago, depended upon books by Liu and other Chinese architects for its descriptions, drawings, and photographs of Chinese dwellings. Unfortunately, Boyd's book did not clearly acknowledge the Chinese origins of his abundant illustrations; thus, because of his careless attribution to Liu's work in particular, many subsequently cited Boyd as the original source.

Two other important architecture books with vernacular content were published in China in 1957: Liu Zhiping's Zhongguo jianzhu leixing ji jiegou (刘致平《中国建筑 类型及结构》Chinese Architectural Types and Structural Forms 1957) and Zhang Zhongyi's Huizhou Mingdai zhuzhai (张仲一《徽州明代住宅》 Ming Dynasty Houses in Huizhou 1957). Liu Zhiping's book, which included many drawings and observations, ranged widely across Chinese architectural forms from palaces to common house types and from bridges to gardens. More importantly, in terms of later acknowledgement, Zhang Zhongyi's book focused on hitherto understudied merchant mansions of southern Anhui Province, bringing attention to magnificent dwellings that were later well documented by others. As with Liu Dunzhen's book, Liu and Zhang's drawings and photographs found their way into some English-language treatments of Chinese architecture without proper attribution.

Moreover, research publications and other activities on these topics between the 1980s and the early 1990 by architects entered a nearly two-decade-long state of dormancy, striking, and melancholic inactivity rather than a period of vigorous and healthy development. Not until the late 1970s and the early 1980s did the state of China's architectural studies enter a period of reinvigoration that shortly became a flood of relevant publications of interest to researchers of vernacular architecture. As these studies emerged one by one, it became clear that limited field research indeed had taken place decades before. Most of these studies were province-by-province descriptive reports that, by the 1980s, were joined by a small number of publications by foreign scholars in English and Japanese. Publications within China in the 1980s through the early 1990s did not explicitly address issues of preservation. Nonetheless, they bequeathed important documentation for those who later began to restore structures to their traditional forms.

3 1980s and early 1990s publications and other activities

The publication of *Zhejiang minju* (《浙江民居》 *Folk* Houses of Zhejiang) in 1984 marked a turning point in the study of China's popular architecture, providing a link with Liu Dunzhen's earlier work in the 1950s. Field work for this book began in 1961, and a draft manuscript was completed by 1963, with follow-up fieldwork, as the addition of new chapters with reorganisation underscores the serious nature of this book. As appropriate for the political climate of the early 1980s, the authorship of Zhejiang minju was officially collective, a joint project of the Center for Chinese Architectural Technology Development Center's Research Unit for Architectural History (中国建筑技术发展中心建筑历史研究所). Going beyond mere description, as had been the case with the books in the 1950s, this generously sized book presented information concerning building materials and practices, as well as the relevant climatic, topographic, social, and historical contexts of Zhejiang, whose vernacular architecture patterns are quite complex.

Senior scholar Zhang Yuhuan (张驭寰) revealed in his 1985 book *Jilin minju* (《吉林民居》 Folk Dwellings of Jilin) that field work was completed in 1956–1957, and the manuscript was finished in 1958. The preface noted with an implicit sense of sadness that publication had been delayed 'for various reasons'. While focusing on the majority Han vernacular architecture forms, Zhang also explored the vernacular dwellings of the Manchu, Korean, and Mongol ethnic minorities in Jilin Province.

In the next year, 1986, Yunnan minju (《云南民居》 Folk dwellings of Yunnan) appeared under collective authorship by Yunnan Provincial Design Institute. As with the other recent provincial surveys, this volume had its origins decades earlier and had benefited from recent limited revision. Additionally, the purpose of the Yunnan

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book went beyond mere documentation and analysis of building traditions to 'make the past serve the present' (古 为今用 gu wei jin yong). This notion of a need for practical relevance rather than mere scholarship indeed became an important characteristic of subsequent academic work in China. Given that Yunnan Province borders Myanmar (Burma), Laos, and Vietnam with a long history of crossborder migration, as well as being China's most ethnically diverse province, the vernacular architecture of nine of the 25 ethnic minority groups in the province was presented in this book. Surprisingly, Han house forms in the province were rarely mentioned, although the book provides a rich resource for cross-cultural comparisons across provinces.

Fujian minju (《福建民居》Folk Dwellings of Fujian), which was published in 1987, was jointly authored by Gao Zhenming (高鈴明), Wang Naixiang (王乃香), and Chen Yu (陈瑜), each of whom took responsibility for different sections. Unlike the abovementioned books, this one did not indicate that the research had been completed decades earlier. This book approached the topic broadly in a topographically fragmented province, presenting information about nearly ninety individual dwellings in roughly 50 locations.

In 1988, no volume was published in what was becoming a series. However, in 1989, the province-specific pattern was broken with Yaodong minju (《窑洞民 居》 Subterranean Folk Dwellings) by Hou Jiyao (侯继 尧), Ren Zhiyuan (任致远), Zhou Peinan (周培南), and Li Zhuanzi (李传泽). Superior in design and presentation in comparison with earlier volumes, this book covered six provinces in the Loess plateau region of North and Northwestern China. The collaborative nature of this work was stimulated by the 1985 international conference on earth-sheltered housing that was held in Beijing. A particular strength of this volume was the effort to work within a comparative approach and towards improving techniques of subterranean construction as well as bettering the overall residences of a building type that then lived in by more than 40 million people.

Guangdong minju (《广东民居》Folk Dwellings of Guangdong) by Lu Yuanding (陆元鼎) and Wei Yanjun (魏彦钧), which was published in Lu and Wei 1990, further advanced the regional treatment of folk architectural forms. This book broke new ground with its emphasis on historical context, cultural factors that are important in site selection and the directional orientation of dwellings, measurements and proportions, and a glossary that indicated the localised use of building terminology. The authors acknowledged that the volume was informed by thesis research completed by their students. While one might assume that the market for this series was expanding, it is curious to note that the initial print run for both

Yaodong minju and *Guangdong minju* was less than half of the Zhejiang volume and a third of the others.

Another volume broke the convention of a province-wide survey. Focusing on a corner of the Guangxi Zhuang Autonomous Region in southern China, Guibei minjian jianzhu (《桂北民间建筑》Folk Architecture of Northern Guangxi) with Li Changjie (李长杰) as the chief editor. Published in 1990, this thick book included fine drawings of Han, Zhuang, Dong, and Yao dwellings, as well as patterns of village settlements, drum towers, covered bridges, opera stages, gatehouses, wayside pavilions, and even country toilets and shrines to earth gods. Suzhou minju(《苏州民居》Folk Dwellings of Suzhou),which was edited by Xu Minsu (徐民苏) and others and published in 1991, presented both common and high-style dwellings in one of China's most historic and picturesque small cities.

Each of these long-delayed books were also printed in Taiwan region with full-form characters and subsequently reissued in different formats in China's mainland even in recent years, sometimes with added author information. As pioneering writings from field research in the 1950s and after, they all provided documentary evidence of structures no longer present, lifestyles changed, and settlements transformed owing to loss and new constructions. In addition to these eight books, which by then comprised a formidable vade mecum, journal articles, sketch books, pamphlets, popular and news articles, and idiosyncratic books began to appear, although they are too numerous to mention in this short essay.

An important source for both scholars and the public was the documentary photography by Li Yuxiang (李玉祥). His work forced many to look at dwellings in new ways through his lens, which captured details often overlooked by architects and heritage specialists. In the late 1980s and early 1990s, Li published a series of thick, heavy books called Laofangzi (《老房子》Old Dwellings), published by the Jiangsu Fine Arts Press. The print run for these always exceeded those of academic books about vernacular architecture, so they were much appreciated by far more readers. Li travelled widely throughout China, taking black and white pictures of building parts, including timber, stone, and clay components, with visually striking images. The editors typically invited a scholar to write an essay in Chinese for each of these volumes, many of which were translated into English. To this day, Li continues to publish widely and posts on social media about vernacular architecture.

Alongside the publication of these works, professors became interested in conferences that would bring together academics and amateurs interested in their local old buildings. In 1988, the newly formed China's Folk Architecture Association (中国民居研究会) held what

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was optimistically called 'The First' symposium at Huanan Science and Technology University in Guangzhou. These have been held quite regularly every other year, with the 28th convening in December 2023 at Changsha University of Science and Technology in Hunan Province. For much of the following decade after 1988, these conferences, which moved throughout China, provided not only a venue for discussions among senior scholars, their graduate students, and others but also visits to buildings that few beyond the local area knew. Although the papers were brief, they were organised into a publication titled China's Traditional Folk Dwellings and Culture (《中 国传统民居与文化》), which appeared a year after the conference, providing documentary proof of the resilience of the organisers and their vision for promoting an important field. The appendix of the 2nd volume includes a six-page compendium listing all known articles and books published about folk architecture. Only four articles were listed for the 1950s, and nine were listed for the 1960s. Year-by-year totals for the 1980s and 1990s were arranged with increasing numbers year after year. China's most prominent senior scholars at the time all participated, among whom were Lu Yuanding (陆元鼎), Shan Deqi (单德启), Huang Hao (黄浩), Sun Dazhang (孙大 章), Li Xiankui (李先逵), Li Changjie (李长杰), and Yang Dayu (杨大禹), Zhu Liangwen (朱良文), Luo Laiping (罗来平), Yan Jichen (颜纪臣), as well as then somewhat younger, but prominent, scholars such as Wang Qijun (王其钧) and Wu Qingzhou (吴庆洲). By 1992, two wellknown scholars from Taiwan region—Huang Hanmin (黄 汉民) and Lee Chien-lang (Li Qianlang, 李乾朗)—joined. Knapp, the first American to be invited. This meeting was the largest held up to that point, with 99 delegates, including 20 from Taiwan and eleven from Hong Kong. The attendees emphasised that 41.4% were younger than 40, and many of them were graduate students. Each symposium had a theme with those during the 21st century, which increasingly focused on preservation and sustainable design. Most of the above scholars subsequently published books and articles that have become part of the canon concerning China's vernacular architecture. Scholarly interest by 'outsiders' in vernacular structures contributed to reframing how locals viewed 'old' buildings as they now began to see them as 'historic'.

4 Recreated vernacular structures in parks

In addition to strictly academic pursuits, some attempts have been made to help the population at large learn about vernacular architecture. This trend blossomed in the 1990s but diminished overall in the following decades. While dozens of these attempts could be discussed, this section highlights only representative ones, especially those still in existence in the 21st century.

Recreating traditional buildings in 'Ethnic Minority Parks' (民族园) and 'Folk Culture Parks' (民俗文化村) came to provide visitors with tangible links to China's vernacular architectural patrimony without the need to travel from their home city, which at the time would have been extremely difficult. Some of these theme parklike facilities had remarkably accurate reconstructions of old dwellings designed by architects and erected by local craftsmen, but many were poor and uncreative representations that 'cannot match "real" culture' (Lin 1996). 'China in a nutshell' is how China Daily announced the opening of the China Folk Culture Village (中国民俗 文化村) in Shenzhen, Guangdong, on October 1, 1991, which included structures representing 21 architectural styles: Bai, Bouyei, Dai, Dong, Gaoshan, Hani, Kazak, Korean, Li, Miao, Mongol, Mosuo, Naxi, Tibetan, Tujia, Uygur, Va, Yao, Yi, and Zhuang, as well as Han Beijingstyle siheyuan and cave dwellings from Shaanxi. The first phase of the Chinese Ethnic Culture Park in Beijing [中 华民族园, now called the China Ethnic Museum (中华民 族博物馆)], opened in time for the Asian Games in 1994, initially boasted dwellings of Bouyei, Dai, Dau'er, Dong, Ewenki, Gaoshan, Hani, Hezhen, Jingpo, Korean, Miao, Oroqen, Qiang, Tibetan, Va, and Yi. Additionally, a China Culture Center representing 'the colorful cultures of China's 56 nationalities' was proposed to be constructed in Huairou County, which is located 60 kilometres north of Beijing. The first phase of the Grandview Garden (大观 园) began in 1996 in the Pudong New Area, Shanghai. This large-scale 73.3-hectare cultural park, according to a press report, 'epitomises the architecture, living habits, clothing, food, handicrafts, wedding customs and festivals, as well as... song and dance' and included attractions such as 'horse racing, bull fighting and cock fights, as well as the first large water-screen film in Shanghai'. Bohai Folklore Garden (渤海风情园) opened in June 1997 along the middle reaches of the Mudan River in Heilongjiang Province. Centred about the recreation of an ancient stockaded Manchu village 1,300 years ago, the site included replicas of Manchu log dwellings.

Near the neolithic Banpo archaeological site (半坡遗址) in Shaanxi Province, an open-air replica museum village was opened in 1994 and, according to a press report at the time, 'gives visitors an insight into the lives of the Banpo people who inhabited the area more than 6,000 years ago.' A high-tech museum was subsequently added between 2002 and 2005. Some sets built for period television or film series were recycled as venues to enjoy Chinese culture in the past: Wuxi Three Kingdoms Film and Television City (无锡三国影视城), which had been constructed for the TV series 'Romance of the Three Kingdoms' near Wuxi in Jiangsu Province, included a palace, temple, army camp, towers, and altar for the

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enjoyment of visitors wanting to experience the architecture and life of 2,000 years ago. Other period compounds connected to film and television series were constructed in Shanxi, Beijing, Hainan, and Hebei, among others. On location filming of historical dramas has helped bring the public's attention to traditional domestic architecture in situ. The residential complex Wangcun in Hunan Province provided the stage for the making of the film Hibiscus Town (《芙蓉镇》) in 1986 after the novel by Gu Hua (古华). With wooden structures and undulating paths paved with stone slabs, Wangcun became a tourist attraction that provided glimpses of not only prerevolutionary China but also the turmoil of the 1960s and 1970s. Qiaojia dayuan (乔家大院), the expansive and splendid mansion of the Qiao family in Qixian, Shanxi, was the background location for filming Raise the Red Lantern (《大红灯笼高高挂》), which was released in 1991. The production and wide distribution of booklets and books as well as even a series of postage stamps helped highlight the vernacular architecture at the time. However, visitors to these complexes often paid more attention to the abundant displays of photos of stars who performed in the films and videos than to the old structures.

5 China's vernacular structures abroad

Nancy Berliner, the then curator of Asian Art at the Peabody-Essex Museum (PEM) in Salem, Massachusetts, searched for and discovered a Chinese dwelling that could be dismantled and transported to the United States. This brought international attention to what many people at the time viewed as a futile exercise (Berliner 2003). However, having successfully negotiated the purchse of the home and its contents from its original owners, the Huang family, and having received approvals from Chinese authorities in 1997 to dismantle the building and ship it to Massachusetts, Yin Yu Tang (荫余堂) was reassembled as an installation in a new wing of PEM in 2003. In August 2023, PEM held a celebration of the 20th anniversary of the installation of this 200-year-old Chinese house. The tale of the migration of this Chinese merchant's home from the Huizhou (徽州) region to the United States continues to be newsworthy in China. The explicit mission of Yin Yu Tang was to preserve the house as well as its contents, documents, and history as examples of Chinese architecture and the related traditions of decorative arts and artisanry. Berliner narrated this story in Yin Yu Tang: The Architecture and Daily Life of a Chinese House (Berliner 2003).

Although Yin Yu Tang has often been heralded as the 'only' Chinese dwelling moved abroad, another house, this one from Yunnan Province, was recently brought to the United States (Levin 2022). This relatively new house,

built only in 1989, was found by John Flower, who was directing a Sidwell Friend's School program in Xizhou (喜洲), Yunnan, in 2017. After meeting the owner, Flower learned that the house was going to be dismantled because its site was to be flooded when a nearby dam was completed. Structurally and aesthetically, this unique farm dwelling is a blend of Tibetan, Naxi, Bai, and Han Chinese ethnic styles and was built by Bai carpenters from Jianchuan County (剑川县). After complex negotiations, disassembly, fundraising, documentation, shipment, and rebuilding at Harper's Ferry, West Virginia began in 2019. As the centrepiece for an ambitious project called the China Folk House Retreat (CFHR), it is already becoming a place for experiential learning, cross-cultural education, and environmental stewardship and broadly promotes a deeper understanding of 'many Chinas'.

6 Western language publications & China's vernacular architecture

For the most part, the writings of foreigners in China even into the twentieth century only provided mere fragmentary glimpses of China's rich vernacular traditions. The first academic article in English concerning 'the houses of the Chinese' appeared in 1947 and was written by the geographer Joseph E. Spencer. Although his survey included admittedly 'preliminary observations', its text, footnotes, and photographs clearly suggested important research themes concerning regional differences in roofs, walls, and minor architectural features of rural dwellings. Moreover, Spencer faulted other observers of Chinese rural architecture who 'generalised into a relatively uniform 'Chinese' pattern, a single simplified style somewhat at variance with the facts'. Unfortunately, for the next quarter century, no foreign geographer was able to build upon Spencer's work because of China's isolation from the world community. On the other hand, across the straits in Taiwan region, some attention was given to the subject, most notably in the large-format bilingual book A Survey of Traditional Architecture of Taiwan (Dillingham and Dillingharn 1971). During this period, those who wrote about the broader topic of Chinese architecture ignored both vernacular architecture and preservation issues. One example is the widely used book *The* Art and Architecture of China by Laurence Sickman and Alexander Soper, the preeminent American art historians at the time (Sickman and Soper 1956), which was revised many times over two decades.

Accompanying the increased Chinese efforts to document and understand their own vernacular architectural forms after 1979, there was a growing interest in the same topics by American, European, and Japanese researchers for comparative purposes. Liu Dunzhen's pathbreaking

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Liu 1957a Zhongguo zhuzhai gaishuo was translated into French as La Maison Chinoise with some rearranging additions (Liu 1980). Drawing on ongoing fieldwork in China and published Chinese sources, China's Traditional Rural Architecture: A Cultural Geography of the Common House was the first book in English to survey broadly the evolution, variety, construction techniques, social context, and contemporary transformations of Chinese dwellings (Knapp 1986). Its nearly 200 photographs and drawings highlighted the richness of Chinese vernacular traditions, but the book was not a definitive treatment of the topic. Unlike similar surveys in China at the time for Chinese audiences, this volume explored the ways in which Chinese dwellings communicated folk beliefs and employed fengshui (geomancy), almanacs, and charms in house construction. While covering topics similar to those of this book, three years later, China's Vernacular Architecture: House Form and Culture (Knapp 1989) focused on a single province, Zhejiang, in eastern China. Each chapter in the book examined the ways in which space, construction principles and techniques, and exterior and interior ornamentation were changing, underscoring the tensions between continuity and innovation as rapid economic changes were impacting rural China during the stressful transformation that was unparalleled in Chinese history.

Until Gideon Golany's three books about what he termed 'earth-sheltered dwellings', only general information about this unique type of vernacular housing was available in English (Golany 1989, Golany 1990, Golany 1992). With detailed drawings and many photographs, Golany highlighted not only the design elements and related thermal performance of below-ground dwellings in China but also how traditional patterns could be improved. Werner Blaser (1979) and Chin Pai (1989) addressed similar questions with the quintessential Chinese dwelling, the Beijing courtyard house *siheyuan*, which varies in scale and proportions throughout China. Each of these books was based on field research conducted with Chinese collaborators.

In 1985, David P. Y. Lung (龙炳颐) from the University of Hong Kong created a college-level course, 'Vernacular Chinese Architecture', the first course offered in English on this subject. The course was subsequently expanded and offered internationally as part of self-paced online education platforms. Lung's 1991 exhibition 'Chinese Traditional Vernacular Architecture' in Hong Kong was an extraordinary multimedia presentation of Chinese vernacular patterns. The accompanying bilingual catalogue by Lung (1991) is a fine survey of a broad range of relevant topic architectures. He subsequently developed online courses that spanned vernacular architecture throughout Asia. In addition to being descriptive, Lung's research sought

to understand the intrinsic beauty of China's vernacular forms on the basis of an analysis of proportion and scale.

Klaas Ruitenbeek's Carpentry and Building in Late Imperial China: A Study of the Fifteenth-century Carpenter's Manual Lu Ban jing (Ruitenbeek 1993) broke new ground on the interplay of ritual and craft used by carpenters in Chinese house construction. His research went beyond that of the folklorist Wolfram Eberhard's 1970 book in demonstrating that the building of a house traditionally—and to some degree even today—was more than a series of practical tasks. Accompanying the proliferation of Chinese language books about fengshui or geomancy, many written by architects, several accessible studies of general geomantic theory were supplanted by Richard J. Smith's (1991) comprehensive survey that informed English language readers of the importance of divination in traditional Chinese society. Rolf Stein's compelling discussion of 'the religious role of the dwelling place in China, which was originally published in French in 1957, was made available in English in 1990. He emphasised the ways in which Chinese cosmological speculations were given material form in their dwellings, an important element in understanding Chinese architecture.

In 1992, at a time when China's population was still 75% rural—by 2020, this number was less than 40%, although it totalled close to 500 million people—the first book looking at China's villages from a geographic perspective was published as Chinese Landscapes: The Village as Place (Knapp 1992). It included an introduction that summarised the range of different village settlement patterns, introduced the folk-belief system of fengshui, and explored the socioeconomic forces impacting villages. The book included 17 case study essays in categories labelled 'Tradition' and 'Transition' written by well-known anthropologists, architects, geographers, historians, a sociologist, and even a veterinary ecologist. At the time, publications by Chinese architects rarely focused on villages as a unit of study since they preferred individual buildings. As shown and explained below, this substantially changed after 2000, as the unit of study in Chinese-language publications increasingly became the broader village.

With more than 30 years of field research and many writings completed, Knapp published five books between 1999 and 2005, four of which focused on China with a fifth edited volume, Asia's Old Dwellings: Tradition, Resilience, and Change, which placed conditions in China with those elsewhere in Asia. Asia's Old Dwellings (2003) included comprehensive chapters titled 'China's Vernacular Architecture' by Puay-peng Ho (何培斌) and 'Pile-built Dwellings in Ethnic Southern China: Type, Myth, and Heterogeneity' by Xing Ruan (阮昕); both authors have

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published extensively on these topics. Drawing on published Chinese sources for drawings, text, and photographs as well as his own documentation of rural China after 1965, Knapp's China's Old Dwellings (Knapp 2000) was made a free e-book in 2020 as part of the University of Hawai'i Press's Open Access program, with more downloads from China than anywhere else in the world. Chinese Houses: The Architectural Heritage of a Nation (2005a) was published with high-quality, large-format photographs by A. Chester Ong and professionally drawn plans. A Chinese language edition was released in 2018 as 《图说中国 民居》(Tushuo Zhongguo minju). What began as a multidisciplinary symposium as the China Institute in New York City in 2000 evolved into a richly illustrated, comprehensive book titled House Home Family: Living and Being Chinese (2005b). It was translated into Chinese in 2011 as 《家—中国人的居家文化》(Jia: Zhongguo ren de jujia wenhua). Although no direct impact can be measured, it can be speculated that the few foreigners who visited outof-the-way villages for their research were catalysts in validating the significance of their built heritage patrimony for village leaders.

In preparation for the writing of the multivolume Encyclopaedia of Vernacular Architecture of the World edited by Paul Oliver (1997), a major effort was made to locate authors within and outside China who could write about vernacular architecture there. At that time, most correspondence was done by mail rather than email. Still, approximately one hundred topical and regional entries about China were commissioned and included. A companion volume Atlas of Vernacular Architecture of the World prepared by Marcel Vellinga, Paul Oliver, and Alexander Bridge (Vellinga et al. 2008) presented summaries of this information graphically. Aware that Paul Oliver's pioneering work needed updating, an expanded 2nd edition with chief editor Marcel Vellinga was begun in 2015. Although most of the revised and new China entries were completed by 2020, publication was delayed and is forthcoming in a much expanded six volumes (Marcel Vellinga: Encyclopaedia of Vernacular Architecture of the World. 2nd edition, forthcoming 2025). China related vernacular architecture entries in the new edition number approximately 100.

7 Research and practice in the 21st century

Fieldwork by Chinese and foreign scholars and graduate students in the 1990s led inexorably to a burst of books and articles in the decades that followed. Chinese-language and English-language books are often translated in the hopes of an international readership. While many books were free-standing, others appeared in series in the expectation of a greater impact. However, a review

of library holdings in WorldCat reveals that international exposure to the earliest books was minimal but increased significantly as books were reprinted. This may have been the result of inadequate marketing by Chinese publishing houses in the early years, which improved significantly over the past 10 years.

In the one and a half decades following 1993, several series were published in China that showcased recent field work regarding vernacular buildings as well as broader village environments. For the most part, these series included well-designed books with abundant colour photographs and intricate drawings that were placed in China's bookstores in sections related to domestic travel, no doubt piquing the interest of those interested in venturing across the country in search of new adventures. However, few of these works have found their way into university libraries outside China.

The most prominent series were published in association with universities such as Tsinghua University, Shanghai Jiao Tong University, and Southeast University. Many of the books include the rich black and white early photography of Li Yuxiang, supplemented with more recent colour images: Xiangtu Zhongguo ("乡土中国" Vernacular China), Zhongguo gu cunluo ("中国古村落" China's old villages); Jiangnan jianzhu wenhua congshu ("江南建 筑文化丛书" Architectural Culture South of the Yangtze); Huizhou gujianzhu congshu ("徽州古建筑丛书" Ancient Architecture in Huizhou). The stated English titles are those of the publications and thus sometimes differ from conventional translations. In some cases, the books provided repackaged information under the name of a reputed well-known academic author who actually did not carry out the recent research. Most of the books mentioned below have been reprinted multiple times and distributed by different publishing houses.

Although these works are too numerous to mention them all, several should be highlighted. The renowned scholar Chen Zhihua (陈志华) of Tsinghua University is the author of Nanxijiang zhongyou gucunluo (《楠溪江中游古村落》Old villages in the middle reaches of the Nanxijiang, Chen 1999). In the same series, a younger scholar Liu Jie (刘杰), of Shanghai Jiao Tong University wrote Taishun (《泰顺》Liu 2001), a county in a once remote area of Zhejiang Province where he carried out dissertation research. Liu Jie completed his PhD at Tongji University in 2006, subsequently becoming prominent at Shanghai Jiao Tong University not only for publications about villages but also for highlighting China's incredible woven-arch timber bridges.

The inveterate field researcher Gong Kai (龚恺) of Southeast University is responsible for five volumes between 1993 and 2001 in the bilingual Huizhou gu jianzhu congshu series, each focusing on the dwellings, halls,

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and temples of an individual village: *Tangyue* (《棠樾》 Gong 1993, expanded 1999); *Zhanqi* (《瞻淇》 Gong 1996); *Yuliang* (《渔梁》 Gong 1998); *Zhifeng* (《多峰》 Gong 1999); and *Xiaoqi* (《晓起》 Gong 2001).

Similar village-focused books with striking photography and drawings in the series Zhongguo gucunluo ("中国古村落" China's old villages) were issued by the university publisher Hebei jiaoyu chubanshe in greater print numbers, including those by Chen Zhihua, Zhangbi Cun (《张壁村》Chen 2002); Gong Kai, Zhifeng Cun (《豸峰村》Gong 2003); Liu Jie, Kucun (《库村》Liu 2003) and Li Qiuxiang (李秋香), Shiqiao Cun (《石桥村》Li 2002), Liukeng Cun (《流坑村》Li 2003a), Xiwenxing Cun (《西文兴村》Li 2003b), and a coauthored book with Chen Zhihua, Li Qiuxiang, and Lou Qingxi (楼庆西), Xinye Cun (《新叶村》Chen et al. 2003).

The five titles in the Jiangnan jianzhu wenhua congshu series published by Shanghai Jiao Tong University were first issued in Chinese between 2006 and 2009 and then reissued as complete translated volumes in English in 2009-2010. No other similar series in China has full English-translated books whose titles are also available as e-books. Although colour illustrations are not found in these well-designed books, each is replete with historical images, architectural drawings, and photographs: Lin Feng (林峰), Jiangnan shuixiang (《江南水乡》Lin 2006, Canal Towns South of the Yangtze Lin 2009); Ding Junqing (丁俊清), Jiangnan minju (《江南民居》Ding 2008, Folk Houses South of the Yangtze 2009); Zhang Yaxiang (张亚祥), Jiangnan wenmiao (《江南文庙》 Zhang 2009, Confucian Temples South of the Yangtze Zhang 2010); Liu Jie, Jiangnan mugou (《江南木构》 Liu 2009, Wood Construction South of the Yangtze Liu 2009); and, Wang Yuan (王媛), Jiangnan chansi (《江 南禅寺》 Wang 2009, Buddhist Monastery South of the Yangtze Wang 2010).

Over the same two decades, Western scholars (including some of Chinese descent) have published academic books on China's architecture, which serve as important source material concerning issues of heritage and heritage preservation in the Spatial Habitus: Making and Meaning in Asian Architecture series published by the University of Hawai'i Press: Xing Ruan, Allegorical Architecture: Living Myth and Architectonics in Southern China (2006); Jeffrey W. Cody, Nancy S. Steinhardt, and Tony Atkin, eds. Chinese Architecture and the Beaux-Arts (2011); Jiren Feng (冯继仁), Chinese Architecture and Metaphor: Song Culture in the Yingzao Fashi Building Manual (2012); Bianca Bosker, Original Copies: Architectural Mimicry in Contemporary China (Bosker 2013); Charles Musgrove, China's Contested Capital: Architecture, Ritual, and Response in Nanjing (2012), Nancy S. Steinhardt, Chinese Architecture in an Age of Turmoil, 200–600 (2014); James A. Flath, Traces of the Sage: Monument, Materiality, and the First Temple of Confucius (2016); Lala Zuo (左拉拉), Diversity in the Great Unity: Regional Yuan Architecture (2019); Alexandra Harrer, Dougong: The Cultural Geometry of the Chinese Bracket Set (forthcoming).

Additionally, although other books do not focus on vernacular forms, several that present new perspectives on heritage issues should be mentioned; these include the following: The Divine Nature of Power: Chinese Ritual Architecture at the Sacred Site of Jinci (Miller 2007) by Tracy Miller; What the Emperor Built: Architecture and Empire in the Early Ming (Campbell 2020) by Aurelia Campbell; and Home Beyond the House: Transformation of Life, Place, and Tradition in Rural China (Zhao 2022) by Wei (Windy) Zhao. Zhao's book reveals the challenges of village transformation as seen through the eyes of villagers.

Many of the heavily illustrated Chinese language books on vernacular architecture by Wang Qijun (王其钧) and Shan Deqi (单德启) have been translated into English and are available worldwide. Nancy S. Steinhardt, the unrivalled scholar of China's architectural history, has a formidable catalogue of books, although discussions of vernacular forms are secondary to broader analysis: her publishing of important books dates to the 1970s with recent publications such as *China's Early Mosques* (Steinhardt 2015); China: An Architectural History (Steinhardt 2019); The Borders of Chinese Architecture (Steinhardt 2022); and Yuan: Chinese Architecture in a Mongol Empire (Steinhardt 2023). Tracy Miller is a key member of an international team that has created the dynamic website Architectura Sinica (https://architecturasinica. org), an interactive Creative Commons resource for the study of the full range of China's traditional architecture, including vernacular forms.

The decade-by-decade inventory of publications in Chinese and Western languages portrays an accumulating reservoir of localised background textual and visual material. Moreover, new directions emerged in 2000 when the initial guidelines for national cultural heritage practices in China led to two complete villages in Anhui Province—Hongcun (宏村) and Xidi (西递)—being declared UNESCO World Heritage sites. This was the first time that rural heritage complexes received recognition at any level in China; in this case, two remarkable villages were internationally highlighted. Several other unique vernacular structures and settlements were subsequently granted World Heritage status: Kaiping diaolou (开平碉楼) and villages in Guangdong in 2007; Earthen tulou in Fujian (福建土楼) in 2008; and the Cultural Landscape of Honghe Hani Knapp Built Heritage (2024) 8:44 Page 10 of 14

Rice Terraces (哈尼梯田) in 2013. Too many to list here, other aggregations of villages are competing for inclusion and advancement on the lengthening national UNESCO Tentative List.

What then transpired over the nearly quarter century since has been presented by Anna-Paola Pola as not merely a preservation issue but also one in which China's leadership made a commitment to tackling issues relating to a lagging rural sector in comparison to cities with action plans (Pola 2019, 2020). Measures to reduce the urban-rural gap became the focus of policies termed 'Building a New Socialist Countryside' (建设社会主义新农村) in 2005 and, more recently, in 2018, 'Rural Revitalisation' (乡村振兴). Although these policies have mostly been geared towards poverty alleviation, food security, and economic development more broadly, important threads related to tangible and intangible cultural heritage have also emerged.

The background for these was the listing in 2003 of the first group of Chinese Historical and Cultural Towns & Villages, an identifying inventory whose purpose was to improve the management of village resources. This was followed in 2012 by a survey that identified the first group of traditional villages with distinctive vernacular architecture, a settlement layout, and associated intangible cultural elements. The momentum spurred by these national decisions at the level of the Ministry of Housing and Urban–Rural Development provided guidance for cooperative efforts by academics, professionals and governmental leaders at many levels.

The early efforts during the first decade of the 21st century led to robust efforts that could not have been imagined earlier. In April 2023, the Ministry of Housing and Urban–Rural Development announced that 8,155 traditional villages with 539,000 historic buildings and traditional dwellings were now under state protection. The magnitude of these raw numbers, of course, should not lead to the conclusion that China has solved either preservation or poverty alleviation goals in all or even most of them.

8 The second and third decades of the 21st century

The second decade of the 21st century brought with it a proliferation of online, open source/open access journals published *in China* but *in English* with research articles, review articles, and case study reports. While serving the purpose of bringing Chinese scholarships to an international audience, these journals also include authors from around the world who provide a comparative perspective via channels of major international publishing entities. *Frontiers of Architectural Research*, which was started in 2012 as part of the Elseviers ScienceDirect program, included Wang Jianguo (王建国) of Southeast

University Nanjing as the Chief Editor. Although architectural heritage conservation is one focus, Frontiers broadly introduces and reviews significant and pioneering achievements in the field of architecture research. The Journal of Chinese Architecture and Urbanism, with Zhang Jie (张杰) and Donia Zhang (张晓东) as Editorsin-Chief, is a title in the catalogue of AccScience Publishing, which was established in Singapore in 2016. As part of the SpringerOpen program, the specialised journal Built Heritage, under the joint editorship of Chang Qing (常青) and Zhou Jian (周俭) of Tongji University, has the goal 'to enhance pluralism and criticism in debates on heritage conservation and revitalisation with a globalised perspective'.

Among some notable articles in these journals, several should be mentioned since they highlight changes over time. 'China's Architectural Heritage Conservation Movement' by Zhu Guangya (朱光亚) in the initial issue of Frontiers of Architectural Research (FAR) identified four distinct periods regarding China's conservation movement. mirroring those presented in this essay. However, in summary, it is useful to recall the words Zhu used to describe the periods: 1929 to 1949 marked 'an open, fundamental, and exploratory period, but turbulent era for most of China because the country was beset by wars'; 1950 to 1978 was 'a practical period' that included 'a national law that required the compiling of lists of heritage items'; and 1979–1999 was 'the opencommunication period' with participation in international conferences such as the International Council on Monuments and Sites (ICOMOS), which China joined in 1985, which unfortunately was accompanied by excessive urbanisation 'destroying numerous districts in old towns and several heritage buildings that were yet to be officially protected. Zhu optimistically asserts that this 'stimulated people to pour their energy into studying and protecting their traditional heritage' (Zhu 2012, 12–13). His fourth period, 2000-2012, concluded the publication of his essay; thus, a very brief time is described as 'a period of integration with multiple patterns ... demonstrating China's ... [adherence to] international standards of value and respect for national... cultural character and for practical experience. Of course, Zhu could not foretell the arc of the following decade to the present. However, in participating in the global conservation dialogue, many in China began to think deeply about domestic issues of conservation and how they differ from those in the West in terms of authenticity, replacement versus reconstruction, disassembly and reassembly, as well as controversies concerning the colour of paints. 'The development of the concept of architectural heritage conservation and its inspiration' by Wen Liang, Yahaya Ahmad & Hazrina Haja Bava Mohidin in Built Heritage (Liang et al. 2023)

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systematically narrated a comprehensive review of the expansion of both the concept and scope of heritage conservation in China from before 2000 to the present. As they state, 'The focus of conservation has evolved from tangible to intangible attributes. The changing scale of conservation, from object to landscape, incorporates a more comprehensive range of heritage values, and the status of conservation has changed from static to living conservation.'

A 2022 article in the Journal of Chinese Architecture and Urbanism coauthored by Sun Na (孙娜), Luo Deyin (罗德胤), and Tang Wen (唐文) provides a remarkable synopsis of the complex set of planning exercises that led to the revival of a village in northern Zhejiang Province, a process that took seven years from when it was first listed as a traditional village in 2014. Pingtian, like many other remote farming-based villages in the country, was hollowed out, essentially emptied of able-bodied villagers because so many had left to find salaried jobs elsewhere, leaving behind the elderly and impoverished. Rural revitalisation has focused on alleviating poverty to alter the path of its development, a process that benefits from a combination of supporting efforts. The farsighted leadership of the Songyang County government laid the foundation for change, which was recognised as a national model in 2014. In 2016, the county was selected for a pilot program by the China Foundation for Cultural Heritage Conservation with the intent of promoting an equitably shared financing scheme for the 'holistic conservation of historic structures. The government at several levels carried the costs of planning and installing modern infrastructure to improve living conditions for remaining residents and satisfy the needs of expected visitors. Reversing rural decay was an objective for improvements to support tourism, which would honour the historic buildings that are set in an appealing natural landscape. A talented design team of experts that included professional architects, landscape architects, interior designers, and lighting specialists working with local craftsmen together with the input of residents helped reshape the environment and rehabilitate dwellings and other structures to meet the anticipated needs of visitors (Sun et al. 2022).

In addition to coauthoring the Pingtian article in the Journal of Chinese Architecture and Urbanism, Luo Deyin of the Architecture Department of Tsinghua University took the lead with several important vernacular architecture projects that centred on rural revitalisation. Most prominent today is the Chinese-language website ivillages.org and the WeChat portal, the Rural Revitalisation Forum (乡村复兴论坛), whose support is leveraged by many organisations interested in poverty alleviation and rural advancement. Architectural design competitions

for college students and village-based forums involving stakeholders, scholars, and practitioners have been held periodically throughout China, including Xinxian County, Henan Province; Tongzi County, Guizhou Province; Taijiang County, Guizhou Province; Rizhao City, Shandong Province; Meixian County, Guangdong Province; Liuba County, Shaanxi Province; Yongtai County, Fujian Province; Dabu County, Guangdong Province; Qinyuan County, Shanxi Province; Xiuwu County, Henan Province; Rongchang District, Chongqing Municipality; and Songyang County, Zhejiang Province.

Of special interest is the On the Road ("在路上") periodical series, which focuses mainly on practical aspects of rural vitalisation and village protection, not on village research by academics. Begun in 2016 and continuing to the present, its full name is On the Road: Essays of Conference for the Revival of Chinese Villages ("在路上: 乡 村复兴论坛文集"). Many of the articles provide details of the forums in the counties listed in the previous paragraph. Thus, issues include rural planning, illustrated sections on architectural and landscape design, lighting, financing, guesthouses/homestays, tourism prospects, landscape aesthetics and beautification, construction technologies, building materials, maintenance planning, design of public spaces, furnishings, village narratives, folkways, and stakeholder participation, among other topics. Perspective drawings, photographs, and drone photographs of successful model village transformations provide fertile documentary evidence for consideration by others involved in bringing about change throughout rural China. Issues four and five in 2018 and 2019 included brief abstracts in English that were added at the end of the Chinese text.

China has two journals that specifically address architectural heritage issues: Jianzhu Yichan (《建筑遗 产》 Architectural Heritage), a Chinese-language journal that was started in 2016, and Built Heritage (《建成遗 产》 Jiancheng Yichan), a quarterly English-language journal that was started in 2017 with an international editorial board and readership. Both are sponsored by Tongji University. Jianzhu Yichan is a publication for professionals that focuses on many aspects of project management, including cost and financial evaluation, construction technology and both traditional and modern materials, standards and testing, and other practical matters. The journal provides a forum for a discussion of issues and theory and is an outlet presenting project results. The goal of Built Heritage, published by Tongji University Press and SpringerNature as an open-source refereed journal, promotes information exchange among scholars and practitioners in China and from around the world. Built Heritage includes research articles and explorations of theory, in addition to the design, implementation, and

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management of individual conservation projects. Curated thematic heritage-based issues have strengthened the focused presentation of topics worthy of global interest.

A review of both of these new journals reveals many case studies that document individual structures, village ensembles, urban neighbourhoods, and cultural land-scapes generally. Peer review of both individual articles and thematic issues provides assurance of quality. Compared with focused articles published more than ten years before, these generally have a more sophisticated analysis that appeals to their international readership. All in all, each includes superior graphics—drawings and maps—that arise from advances in digital technology. That each issue is available online is a bonus that goes far beyond earlier print-only publications.

9 Challenges: authenticity, ongoing management, and tourism

Although great strides have been made in the preservation of China's vernacular architectural heritage, there are still challenges that need to be addressed vigilantly. These challenges, of course, are not unique to China and are related to ensuring and maintaining authenticity, the ongoing management of newly conserved cultural sites, unchecked tourist development, and the need to analyse the nature of acceptable change. Over the full length of the period discussed in this review essay, there have been successes but also failures in the renovation, restoration, or reconstruction of vernacular buildings and building complexes. This broad topic is beyond the scope of this survey essay.

In China, viewpoints concerning authenticity have varied over time and certainly have not been consistent throughout the country. There are no simple answers since the impetus for change ranges from state-initiated actions, often with professional expertise, to local-level initiatives, which are exercises in trial and error. Heritage preservation is too often an act of transformation and modernisation, a reconfiguration of material forms, as many authors have written, including Oakes 2013; Bosker 2013; Zhu 2015; Yan 2018; Zhou et al. 2019; Zhu and Maags 2020; Hein and Foster 2023; Semprebon 2023; Zhu 2024.

The cultural heritage management of village landscapes includes both curatorial presentations of structures and history as well as sites that include long-term residents living their day-to-day lives in agricultural production while interacting with tourists. Maintaining what is best for an authentic project is not an easy task. Indeed, ongoing decisions often generate unforeseen complications that underscore the dynamics of intervention (ICOMOS China 2015).

A complicating aspect of rural transformation is external, arising from the surging character of domestic tourism. Few could have foretold a decade ago the unleashing of massive tourism in rural China. The year-to-year statistics regarding private car ownership by middle-class people living in cities, towns, and even villages and the rapid increase in the issuance of drivers' licences, when combined with the explosive growth of country-wide expressways, have led to unprecedented levels of domestic tourism impacting even remote vernacular sites. The increasing size of parking lots and the institution of entrance fees to villages are some of the markers of the competition for income from tourists arriving by cars and buses. These efforts are regularly reported in the press as intense, leading not only to the restoration of old buildings but also to the renewed recreation of 'old' buildings that support visitors' imagination.

10 Conclusions

This retrospective review helps contemporary readers understand the temporal scope of attention to vernacular structures, a background that is the foundation for current and future historic preservation efforts. The essay chronicles the names of individuals who once played key roles but may not be well known today. In the initial decades after 1949, research efforts focused almost exclusively on recording old structures with basic drawings and photographs. Little effort was made to pursue supporting archival materials. Over time, the search for documents increasingly became more rigorous as written materials surfaced from local and provincial archives as well as from families and clan associations that had saved old documents. Much of this early work was not made available to the public for decades, during which time many old structures were lost for various reasons, some associated with calamitous political movements.

Over the past two decades, there has been an increasing convergence, which has brought academic interest into alignment with the needs of rural residents. At the same time, entrepreneurs and investors are continuing to seek out sites to commodify architectural heritage, an effort that often strains efforts to maintain authenticity. All of this has been complicated as transportation networks continue to expand and automobile ownership explodes. As a result, many communities are struggling with how to balance preservation with the challenges arising from tourism. Many are asking the necessary question 'what are the limits of acceptable change'? Moreover, although empirical research concerning China's vernacular architecture is increasingly rich, this has not been translated into an organised body of theory that would be helpful in moving research forwards.

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Abbreviation

UNESCO The United Nations Educational, Scientific and Cultural Organisation

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References

- Berliner, Nancy. 2003. Yin Yu Tang: The Architecture and Daily Life of a Chinese House. Singapore: Tuttle Publishing.
- Blaser, Werner. 1979. Courtyard House in China: Tradition and Present/Hofhaus in China: Tradition und Gegenwart. Bilingual. Basel: Birkhäuser Verlag.
- Bosker, Bianca. 2013. Original Copies: Architectural Mimicry in Contemporary China. Honolulu: University of Hawai`i Press.
- Boyd, Andrew. 1962. Chinese Architecture and Town Planning. Chicago: University of Chicago Press.
- Campbell, Aurelia. 2020. What the Emperor Built: Architecture and Empire in the Early Ming. Seattle: University of Washington Press.
- Center for Chinese Architectural Technology Development Center's Research Unit for Architectural History. 1984. 浙江民居 [Folk Houses of Zhejiang]. Beijing: China Architecture & Building Press.
- Chen, Zhihua. 1999. 楠溪江中游古村落 [Old villages in the middle reaches of the Nanxijiang]. Beijing: SDX Joint Publishing Company.
- Chen, Zhihua. 2002. 张壁村 [Zhangbi Cun].中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Chen, Zhihua, Qiuxiang Li, and Qingxi Lou. 2003. 新叶村 [Xinye Cun]. 中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Cody, Jeffrey W., Nancy S. Steinhardt, and Tony Atkin, eds. 2011. *Chinese Architecture and the Beaux-Arts*. Honolulu: University of Hawai`i Press.
- Dillingham, Reed, and Chang-lin Dillingham. 1971. A Survey of Traditional Architecture of Taiwan. Taichung: Center for Housing and Urban Research, Tunghai University.
- Ding, Junqing. 2008. 江南民居 [Folk Houses South of the Yangtze]. 江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Ding, Junqing. 2009. Folk Houses South of the Yangtze. 江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Eberhard, Wolfram. 1970. Studies in Chinese Folklore and Related Essays. Indiana University Folklore Institute Monograph Series, Vol. 23. The Hague: Mouton

- Feng, Jiren. 2012. Chinese Architecture and Metaphor: Song Culture in the Yingzao Fashi Building Manual. Honolulu: University of Hawai`i Press.
- Flath, James A. 2016. *Traces of the Sage: Monument, Materiality, and the First Temple of Confucius*. Honolulu: University of Hawai'i Press.
- Gao, Zhenming, Naixiang Wang, and Yu. Chen. 1987. 福建民居 [Folk Dwellings of Fujian]. Beijing: China Architecture & Building Press..
- Golany, Gideon. 1989. *Underground Space Design in China: Vernacular and Modern Practice*. Newark: University of Delaware Press.
- Golany, Gideon. 1990. Design and Thermal Performance: Below-ground Dwellings in China. Newark: University of Delaware Press.
- Golany, Gideon. 1992. Chinese Earth-sheltered Dwellings: Indigenous Lessons for Modern Urban Design. Honolulu: University of Hawai'i Press.
- Gong, Kai. 1993. expanded 1999. 棠樾 [Tangyue]. 徽州古建筑丛书 [Ancient architecture in Huizhou] series. Nanjing: Southeast University Press.
- Gong, Kai. 1996. 瞻淇 [Zhanqi]. 徽州古建筑丛书 [Ancient architecture in Huizhou] series. Nanjing: Southeast University Press.
- Gong, Kai. 1998. 渔梁 [Yuliang]. 徽州古建筑丛书 [Ancient architecture in Huizhou] series. Nanjing: Southeast University Press.
- Gong, Kai. 1999. 豸峰 [Zhifeng]. 徽州古建筑丛书 [Ancient architecture in Huizhou] series. Nanjing: Dongnan daxue chubanshe.
- Gong, Kai. 2001. 晓起 [Xiaoqī]. 徽州古建筑丛书 [Ancient architecture in Huizhou] series. Nanjing: Dongnan daxue chubanshe.
- Gong, Kai. 2003. 豸峰村 [Zhifeng Cun]. 中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Hein, Anke, and Christopher J. Foster, eds. 2023. *Understanding Authenticity in Chinese Cultural Heritage*. London: Routledge. https://doi.org/10.4324/9781003290834.
- Hou, Jiyao, Zhiyuan Ren, Peinan Zhou, and Zhuanzi Li. 1989. 窑洞民居 [Subterranean Folk Dwellings]. Beijing: China Architecture & Building Press.
- ICOMOS China. 2015. 中国文物古迹保护准则 [Principles for the Conservation of Heritage Sites in China] Rev. ed. Beijing: Cultural Relics Press. http://hdl.handle.net/10020/gci_pubs/china_principles_2015.
- Knapp, Ronald G. 1989. China's Vernacular Architecture: House Form and Culture. Honolulu: University of Hawai'i Press.
- Knapp, Ronald G., ed. 2003. *Asia's Old Dwellings: Tradition, Resilience, and Change.* New York: Oxford University Press.
- Knapp, Ronald G., and Kai-Yin. Lo, eds. 2005b. *House Home Family: Living & Being Chinese*. Honolulu: University of Hawai`i Press in cooperation with China Institute.
- Knapp, Ronald G. 2005a. *Chinese Houses: The Architectural Heritage of a Nation*. Singapore: Tuttle Publishing/Periplus.
- Knapp, Ronald G., and Kai-Yin. Lo, eds. 2011. 家——中国人的居家文化 [House Home Family: Living and Being Chinese]. Beijing: New Star Press.
- Knapp, Ronald G. 2018. 图说中国民居 [Chinese Houses: The Architectural Heritage of a Nation]. Translated by Yunan Ren. Beijing: SDX Joint Publishing Company.
- Knapp, Ronald G. 1986. China's Traditional Rural Architecture: A Cultural Geography of the Common House. Honolulu: University of Hawai'i Press, 1986
- Knapp, Ronald G. 1992. ed. *Chinese Landscapes: The Village as Place*. Honolulu: University of Hawai`i Press, 1992.
- Knapp, Ronald G. 2000. Chind's Old Dwellings. University of Hawai`i Press. https://manifold.uhpress.hawaii.edu/projects/china-s-old-dwellings.
- Levin, Sala. Home Away from Home. 2022. Sidwell Friends Alumni Magazine. https://www.sidwell.edu/alumni/magazine/magazine-detail/~board/magazine/post/home-away-from-home.
- Li, Changjie, ed. 1990. 桂北民间建筑 [Folk Architecture of Northern Guangxi]. Beijing: China Architecture & Building Press.
- Li, Qiuxiang. 2002. 石桥村 [Shiqiao cun].中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Li, Qiuxiang. 2003. 流坑村 [Liukeng cun]. 中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Li, Qiuxiang. 2003. 西文兴村 [Xiwenxing cun]. 中国古村落 [China's old villages] series. Shijiazhuang: Hebei jiaoyu chubanshe.
- Liu, Jie. 2009. Wood Construction South of the Yangtze. 江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Li, Yuxiang. 1980–1990. 老房子 [Old Dwellings]. Nanjing: Jiangsu meishu chubanshe.

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- Liang, Wen, Yahaya Ahmad, and Hazrina Haja Bava. Mohidin. 2023. The development of the concept of architectural heritage conservation and its inspiration. *Built Heritage* 7 (3): 46–55. https://doi.org/10.1186/s43238-023-00103-2.
- Lin, Feng. 2006. 江南水乡 [Canal Towns South of the Yangtze]. 江南建筑文 化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Lin, Feng. 2009. Canal Towns South of the Yangtze:江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Lin, Jinghua. 1996. 'Parks Cannot Match "Real" Culture'. China Daily, January 6. Liu, Dunzhen. 1957. 中国住宅概说 [Introduction to Chinese Dwellings]. Beijing: China Architecture & Building Press.
- Liu, Zhiping. 1957. 中国建筑类型及结构 [Chinese Architectural Types and Structural Forms]. Beijing: China Architecture & Building Press.
- Liu, Jie. 2001. 泰顺 [Taishun]. Beijing: SDX Joint Publishing Company.
- Liu, Jie. 2003. 库村 [Kucun]. 中国古村落 [China's old villages] series. Shiji-azhuang: Hebei jiaoyu chubanshe.
- Liu, Jie. 2009. 江南木构 [Wood Construction South of the Yangtze]. 江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Liu, Dunzhen. 1980. *La Maison Chinoise*. Translated by S. Clément, and P. Clément. Paris: Berger-Levraul.
- Lu, Yuanding, and Yanjun Wei. 1990. 广东民居 [Folk Dwellings of Guangdong]. Beijing: China Architecture & Building Press.
- Lung, David P.Y. 1991. 中國傳統民居建築 [Chinese Traditional Vernacular Architecture]. Bilingual. Hong Kong: Regional Council.
- Lung, David P.Y. 1985. Online vernacular architecture in Asia course. https://www.mooc-list.com/instructor/david-p-y-lung.
- Miller, Tracy. 2007. The Divine Nature of Power: Chinese Ritual Architecture at the Sacred Site of Jinci. Cambridge: Harvard University Press.
- Musgrove, Charles. 2012. China's Contested Capital: Architecture, Ritual, and Response in Nanjing. Honolulu: University of Hawai'i Press.
- Oakes, Tim. 2013. Heritage as Improvement: Cultural Display and Contested Governance in Rural China. *Modern China* 39 (4): 380–407. https://doi.org/10.1177/0097700412467011.
- Oliver, Paul, ed. 1996. Encyclopaedia of Vernacular Architecture of the World. Cambridge: Cambridge University Press.
- Pai, Chin. 1989. Traditional Chinese House Form: The Courtyard House Compound of Peking. *Asian Cultural Quarterly* 17 (3): 39–56.
- Pola, Anna-Paola. 2019. When Heritage is Rural: Environmental Conservation, Cultural Interpretation and Rural Renaissance in Chinese Listed Villages. Built Heritage 3 (2): 64–80. https://doi.org/10.1186/BF03545728.
- Pola, Anna-Paola. 2020. 'Let the Past Serve the Present' Rural Development and Soft Power in the Preservation of Chinese Villages. *Journal of the Royal Asiatic Society of China* 80 (1): 9–34.
- Ruitenbeek, Klaas. 1993. Carpentry and Building in Late Imperial China: A Study of the Fifteenth-century Carpenter's Manual Lu Ban jing. Leiden: E. J. Brill.
- Semprebon, Gerardo. 2023. The Rural as a Frontier of Expression in Contemporary Chinese Architecture. Projects and Strategies to Mitigate the Hollowing of Countryside Settlements. *Contesti Città territori progetti*, no. 1:93–116. https://doi.org/10.36253/contest-14587.
- Sickman, Laurence, and Alexander Soper. 1956. *The Art and Architecture of China*. Baltimore: Penguin Books.
 Skinner, R. T. F. 1958. Chinese Domestic Architecture. *Journal of the Royal Insti-*
- tute of British Architects 65: 430–431.
 Smith, Richard J. 1991. Fortune-Tellers & Philosophers: Divination in Traditional
- Smith, Richard J. 1991. Fortune-Tellers & Philosophers: Divination in Traditional Chinese Society. Denver: Westview Press.
- Spencer, Joseph E. 1947. The Houses of the Chinese. *Geographical Review* 37: 254–273.
- Stein, Rolf. 1990. The World in Miniature: Container Gardens and Dwellings in Far Eastern Religious Thought. Translated by Phyllis Brooks. Stanford: Stanford University Press.
- Steinhardt, Nancy S. 2014. Chinese Architecture in an Age of Turmoil, 200–600. Honolulu: University of Hawai`i Press.
- Steinhardt, Nancy S. 2015. *China's Early Mosques*. Edinburgh: Edinburgh University Press.
- Steinhardt, Nancy S. 2019. *Chinese Architecture: A History*. Princeton: Princeton University Press.
- Steinhardt, Nancy S. 2022. *The Borders of Chinese Architecture*. Cambridge: Harvard University Press.

- Steinhardt, Nancy S. 2023. *Yuan: Chinese Architecture in a Mongol Empire*. Princeton: Princeton University Press.
- Sun, Na., Deyin Luo, and Wen Tang. 2022. From Plan to Practice: The revival of Pingtian Village in Songyang County, Zhejiang Province. *Journal of Chinese Architecture and Urbanism* 4 (2). https://accscience.com/journal/
- Vellinga, Marcel, Paul Oliver, and Alexander Bridge. 2008. Atlas of Vernacular Architecture of the World. London: Routledge.
- Wang, Yuan. 2009. 江南禅寺 [Buddhist Monastery South of the Yangtze]. 江 南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Wang, Yuan. 2010. Buddhist Monastery South of the Yangtze. 江南建筑文 化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Xu, Minsu, et al. 1991. 苏州民居 [Folk Dwellings of Suzhou]. Beijing: China Architecture & Building Press.
- Yan, Haiming. 2018. World Heritage Craze in China: Universal Discourse, National Culture, and Local Memory. New York: Berghahn Books.
- Yunnan Provincial Design Institute. 1986. 云南民居 [Folk dwellings of Yunnan]. Beijing: China Architecture & Building Press.
- Zhang, Zhongyi. 1957. 徽州明代住宅 [Ming Dynasty Hous5es in Huizhou]. Beijing: China Architecture & Building Press.
- Zhang, Yuhuan. 1985. 吉林民居 [Folk Dwellings of Jilin]. Beijing: China Architecture & Building Press.
- Zhang, Yaxiang. 2009. 江南文庙 [Confucian Temples South of the Yangtze]. 江南建筑文化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Zhang, Yaxiang. 2010. Confucian Temples South of the Yangtze. 江南建筑文 化丛书 [Architectural Culture South of the Yangtze] series. Shanghai: Shanghai Jiao Tong University Press.
- Zhao, Wei. 2022. Home Beyond the House: Transformation of Life, Place, and Tradition in Rural China. London: Routledge.
- Zhou, Mengyuan, Songfeng Chu, and Du. Xiaofan. 2019. Safeguarding Traditional Villages in China: The Role and Challenges of Rural Heritage Preservation. *Built Heritage* 3 (2): 81–93. https://doi.org/10.1186/BF03545729.
- Zhu, Guangya. 2012. China's Architectural Heritage Conservation Movement. Frontiers of Architectural Research 1 (1): 10–22. https://doi.org/10.1016/j. foar 2012.02.009.
- Zhu, Yujie. 2015. Cultural effects of authenticity: contested heritage practices in China. *International Journal of Heritage Studies* 21 (6): 594–608. https://doi.org/10.1080/13527258.2014.991935.
- Zhu, Yujie. 2024. China's Heritage through History: Reconfigured Pasts. London: Routledge.
- Zhu, Yujie, and Christina Maags. 2020. Heritage Politics in China: The Power of the Past. New York: Routledge.
- Zuo, Lala. 2019. *Diversity in the Great Unity: Regional Yuan Architecture*. Honolulu: University of Hawai`i Press.

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