

Cognitive method of local identity in Chinese historic urban space based on layered morphology: taking Nanjing Mendong area as an example

Método cognitivo de identidade local no espaço urbano histórico chinês baseado na morfologia em camadas: o exemplo da área de Mendong, em Nanjing

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Abstract

Since the Venice Charter, heritage conservation has evolved to encompass historic urban areas, a process refined by subsequent charters, which frame historic cities as complex systems of cultural stratification requiring multidimensional diagnosis. In the traditional Chinese context, historic urban space follows a distinct logic: architecture is marked by material impermanence, while historical continuity are sustained through cultural memory. The interaction between this impermanence and modern urbanization has produced widespread physical absence, creating fundamental challenges for interpreting historic urban space. This paper proposes a framework that understands historic urban space as the dynamic unity of material transformation and narrative continuity, recognizing architecture, ruins, and physical absence as equally constitutive. Using the Mendong area in Nanjing as a case study, stratigraphic analysis and morphological reconstruction are applied to examine urban form in both present and absent states, providing a new theoretical and methodological tools for interpreting historical knowledge within Chinese urban space.

Resumo

Desde a Carta de Veneza que a conservação do património abrange áreas urbanas históricas, como sistemas complexos de estratificação cultural que requerem um diagnóstico multidimensional. No contexto tradicional chinês, o espaço urbano histórico segue uma lógica distinta: a arquitetura é marcada pela impermanência material, enquanto a continuidade histórica é sustentada pela memória cultural. A interação entre essa impermanência e a urbanização moderna produziu uma ausência física generalizada, criando desafios fundamentais para a interpretação do espaço urbano histórico. Este artigo propõe um enquadramento que entende o espaço urbano histórico como a unidade dinâmica da transformação material e da continuidade narrativa, reconhecendo a arquitetura, as ruínas e a ausência física como igualmente constitutivas. Usando a área de Mendong em Nanjing como estudo de caso, a análise estratigráfica e a reconstrução morfológica são aplicadas para examinar a forma urbana nos estados presente e ausente, fornecendo novas ferramentas teóricas e metodológicas para interpretar o conhecimento histórico dentro do espaço urbano chinês.

KEYWORDS

Historic urban space
Historical stratification
Mendong
Nanjing
Urban morphology

PALAVRAS-CHAVE

Espaço urbano histórico
Estratificação histórica
Mendong
Nanjing
Morfologia urbana

Introduction

The establishment of ICOMOS initially was for the preservation and conservation of monuments and sites. In addition to the *International Charter for the Conservation and Restoration of Monuments and Sites* [1], the Second international congress of architects and technicians of historical monuments formulated a request for the protection and revival of historical centers, which constituted the starting point of the protection and restructuring of historical towns from ICOMOS in 1964. Considering the rapid changes of the globalized reality, Valletta Principles was proposed by CIVVIH in 2011, based on the methods and considerations established in the *Washington Charter* and *Nairobi Recommendation*. Among the issues mentioned in the principle, urban areas are regarded as a complex phenomenon that has arisen as a result of the historical stratification of cultural values, and the historic urban areas should be diagnosed with consideration to all physical and cultural, tangible and intangible dimensions, and it is important to utilize diagnostic methods that can identify the unique cultural identity of historic towns and urban areas [2]. Thus, the cognitive issue matters when we face the historic urban space, and for China, the issue is complex.

Issues inherent to the Chinese historic urban spaces itself reveal the instability. In the historical context, this instability is rooted in a traditional architectural view that does not prioritize the long-term preservation of original material fabric. Chinese traditional architecture has historically accepted frequent reconstruction, repair, and material replacement as intrinsic components of spatial continuity. The persistence of cultural meaning and urban memory was thus archived not through the endurance of physical objects, but through the sustained transmission of narrative. In the modern context, this instability is further intensified by the rapid urbanization that has accompanied China's growth since the late twentieth century. Large-scale redevelopment has often erased traditional urban fabrics with new construction, frequently without sufficient reflection on historical continuity. Paradoxically, under the influence of modern construction systems, the material environments produced in recent decades increasingly emphasize structural permanence, durability, and technical stability. Consequently, China's historic cities today exhibit a striking contradiction: while their traditional material spaces were historically fluid and renewable, contemporary urban forms aspire to physical permanence, even as they simultaneously accelerate the erasure of inherited urban textures. Together, these historical and modern dynamics generate a complex situation in China's historic urban spaces, it is difficult to comprehend historic cities solely through surviving physical environments. This condition demands an expanded interpretive framework that integrates material remains with documentary records and cultural narrative.

Historic city as a kind of cultural landscape has archaeological and historical stratigraphy, proposed by the discussion related to the historic urban landscape (HUL) [3]. History takes place in both time and space. The spatialization of temporal dimension is essential to give the sequence of superposition meaning. Urban archaeology as an emerging theme, its role in the historic urban environment could be regarded as important to "imagine a different and richer role of ancient substrata not limited to heritage sites but concerning the urban in the present and in the future". Archaeology could be introduced as an analytic method related to architects because the temporal dimension is "spatialization" [4]. Through the stratigraphic analysis, the historical layering of urban space could be read and cognized properly. Stratigraphic analysis, an important archaeological method, can be employed to unveil the historical facts lying there and what happened over time. It tells the temporal-spatial relationship of the historic cities, and for the specific areas, it tells the historical knowledge and their functions over time [5]. For a historic city, the study of historical layering could demonstrate the different phases in the evolution of the historic urban space and constitute a thorough excavation and systematic evaluation of the extinction value of a historic city.

Archaeology offers knowledge but the architect has the task to relate this knowledge to the content which he has to “put to form” [4]. Considering the impermanence of the physical objects in the Chinese traditional architectural context and also the blind demolishing resulting from rapid urbanism, this paper will take the Nanjing Mendong area as an example and try to conduct the morphological analysis integrated with the literary sources and historical documentation to clarify and complete the morphological evolution of historic urban space, aiming to establish the comprehensive cognition and identity of the Mendong area.

Situation of the Chinese historical urban area and dilemma

Impermanence issue

After the approaches to urban conservation in the Washington and Nairobi Charters, the Valletta Principles (2011) have redefined objectives, attitudes, and tools for the evolution of definitions and methodologies of preservation in historic towns and urban areas. A higher awareness of intangible values contributing to the character and identity of historic areas as well as the multifaceted challenges of modification were introduced in the coherence of all tangible and intangible heritage values. It suggested that diagnostic methods must be used to identify the particular cultural identity of the historic urban areas considering the urban areas are complex phenomena that have resulted from the historical stratification of cultural values. Thus, the cognitive issue matters when we face the historic urban space, and for China, the issue is complex. China has a different situation: the limitation of architectural physical objects. This point could be illustrated by the fragility of materials in ancient China.

It is particularly important to note that this paper does not adopt a binary perspective that contrasts a Western emphasis on tangible remains with a Chinese traditional focus on intangible dimension. Such a simplification is clearly inadequate, as China also possesses numerous “permanent” constructions in stone, including bridges and city walls, etc. Rather, the purpose of this study is to develop a deeper understanding of the characteristics of architectural space in the traditional Chinese context, where building practices were predominately based on earth and wood. At the level of historical urban transformation, this tradition has produced a pattern in which the material form of urban space exhibits discontinuity, while the cultural and symbolic dimensions of space demonstrate relative continuity.

Sicheng Liang (梁思成, 1901-1972), who was a very famous Chinese architect and architectural historian, illustrated traditional Chinese architecture features from the perspective of technique and ideology, and one point he mentioned in ideology is the “concept of impermanent of the original object (不以原物之常存)” [6]. He argued that the ancient physical existing above the ground remained few although the duration of the Chinese architectural system goes beyond four thousand years, and he explained it as the limited durability of wooden construction but, for a deeper reason, the concept of impermanent the original object. Furthermore, Liang stated that ancient China had no deliberate intention, like Egypt, to chase a permanent construction project, but rather preferred the rule of metabolism in architecture: either regarding buildings as substitutable or having no ambition of keeping the original object intact. This traditionary idea results in two facts: firstly, content with the utilization of wooden material for thousands of years instead of going deeply into the stone; secondly, more newly reconstructed than renovation of the original object. Besides, he mentioned the tomb, which was mainly constructed underground with stone and brick, as an exceptive example in ancient Chinese architecture, and there are different considerations behind this construction difference: the tomb is built for permanent preservation.

As the idea from Liang showed above, the ancient Chinese attitude had a preference for reconstruction and the performance derived from the specific ideology. The author concluded two points for this issue as follows:

1. Attitudes case towards time

The understanding of time has a crucial influence on architectural issues. From the perspective of philosophical context, the classical linear structure is more familiar in the West, while the cyclical structure of time is accepted by non-Western perspectives [7]. Besides, Pierre Ryckmans pointed out the Chinese attitude towards time: “Nothing immobile can escape the hungry teeth of the ages” [8]. Therefore, the Chinese constructors gave up on the onrush of time and deflected it instead. Then, he proposed the phenomenon that Chinese architecture is made of perishable and fragile materials, and it decays rapidly and requires frequent rebuilding.

2. More emphasis on the existence of the mind rather than that of material

The characteristic of Chinese traditional cultural context: Spiritual presence and physical absence of the past. Emphasizing intangibility rather than tangibility could be regarded as one of the characteristics of the Chinese traditional cultural context, and it was concluded as “Spiritual presence and physical absence of the past” by Pierre Ryckmans, a well-known international expert in sinology. China has a different situation where it is loaded with considerate history and memories but deprived of ancient monuments. Although the monumental absence of it, the past which continues to influence Chinese life in many subtle but powerful ways might remain on the people instead of material objects. In Ryckman’s opinion, the Chinese past is both spiritually active and physically invisible.

Building on this understanding, this paper further argues that a spatial conception exists within traditional Chinese architecture and historical urban environments – namely, a cultural logic that prioritizes narrative over materiality. This logic is manifested in two interrelated dimensions. On the one hand, the material form of historical space exhibits pronounced discontinuity, as architecture based primarily on earth-and-timber construction has undergone repeated cycles of destruction, reconstruction, and renewal over the history. On the other hand, its cultural meaning and collective identity remain highly continuous, sustained through historical texts, local gazetteers, and shared narratives that enable the persistence of spatial significance beyond physical transformation.

This cultural logic is exemplified most clearly in the historical evolution of Yueyang Tower. Since its initial construction during the Three Kingdoms period, the tower has been repeatedly destroyed and rebuilt as a result of warfare, flooding, fire, and political change. Its location, scale, and architectural form have varied considerably across different dynasties. Yet despite these continual material transformations, Yueyang Tower has remained a powerful cultural landmark within the Chinese collective memory. The site continues to attract large numbers of visitors, a phenomenon driven primarily not by the material presence of the existing structure, but by the immersive cultural experience produced through literary narratives and historical imagination – most profoundly shaped by the spiritual and symbolic literary work of Yueyang Lou Ji (*Inscription of Yueyang Tower*). For most visitors, emotional identification with the site is grounded more in this cultural imagery than in the material qualities of the extant architectural construction.

Moreover, reconstructions based on historical textual descriptions reveal that Yueyang Tower assumed dramatically different architectural forms in different periods (Figure 1). This morphological evolution indicates that the architectural identity of Yueyang Tower has never been fixed in any single material configuration; rather, it has remained fluid, renewable, and open to reinterpretation. In certain historical moments, the physical structure even disappeared entirely, with its spatial meaning sustained solely through textual records and cultural imagination.

The transformation of Yueyang Tower thus vividly illustrates a fundamental principle of traditional Chinese cultural space: continuity of narrative and symbolic meaning takes precedence over the permanence of material form.

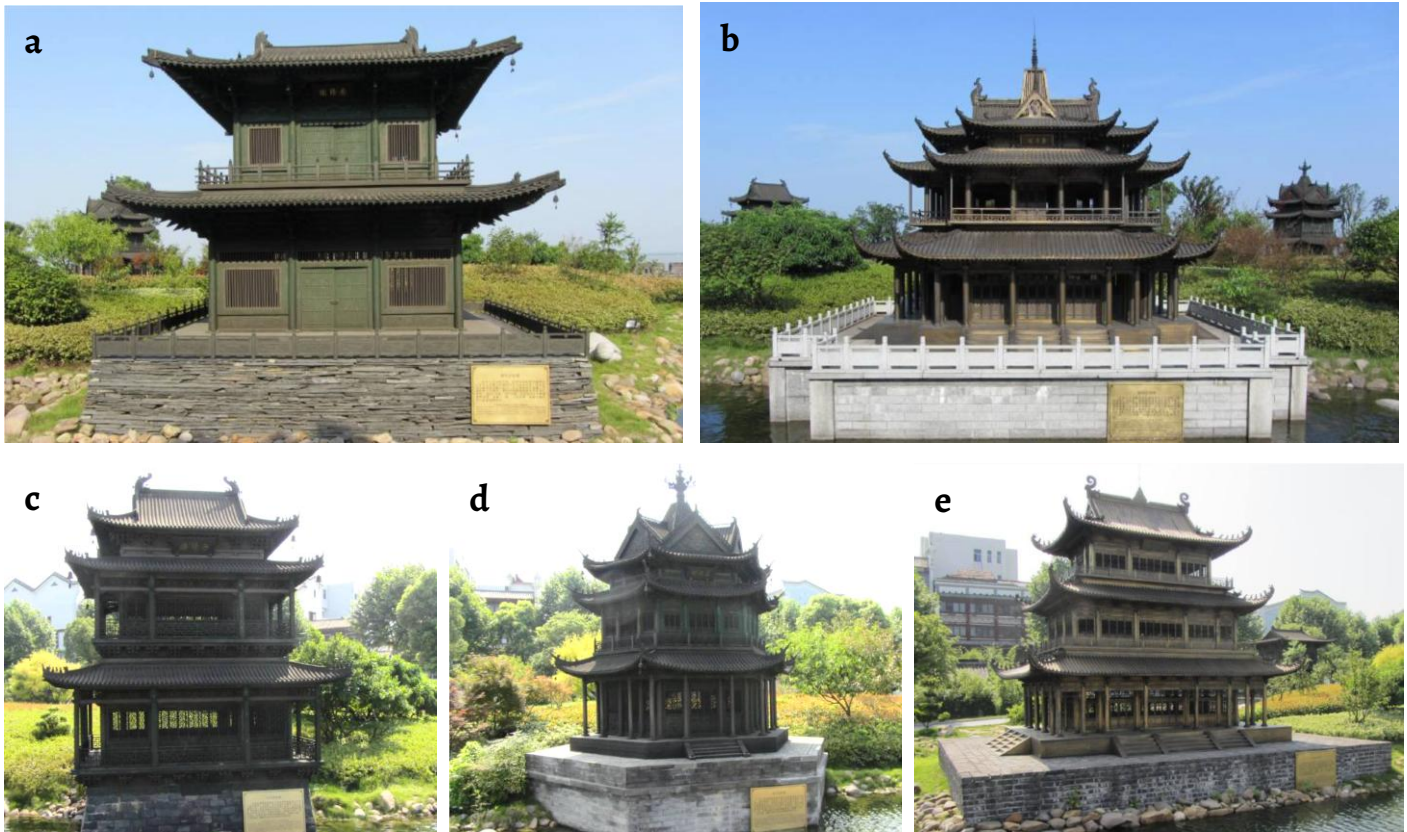


Figure 1. Five-dynasty representations of the Yueyang Tower (五朝楼观): *a*) Tang Dynasty (late 7th-9th century); *b*) Song Dynasty (10th -early 13th century); *c*) Yuan Dynasty (late 13th century – early 14th century); *d*) Ming Dynasty (late 14th century – early 17th century); *e*) Qing Dynasty (mid-17th century – early 20th century) [9].

More broadly, within the long-term evolution of Chinese historical cities, material space has been subject to frequent cycles of demolition, repair, and reconstruction as a result of warfare, natural disasters, dynastic transitions, and administrative reorganization. Yet urban spatial identity and historical continuity have not been fundamentally disrupted by these material ruptures. The underlying reason lies in the continuity of narrative, which is deeply embedded in documentary media such as historical texts, place-name systems, and local gazetteers, rather than being dependent solely on the material persistence of any particular architectural entity.

Similarly, Frederick W. Mote, another remarkable American sinologist, discussed the attitude of China towards the past with an example of the historical city, Soochow [12]. He quoted the observation from Hampden C. DuBos, who settled in Suzhou in 1872 as a missionary. DuBos notes: “There are no ancient ruins in the city. The local history tells us of many famous buildings which were the pride of the people in the centuries gone by, yet their walls were not built of hewn stones, as in Athens and Rome, to withstand the ravages of ages” [12].

In this respect, Mote proposed a similar view as Liang. he also explained that China doesn't have these not because of the incapacity to build with bricks and stones, like in Athens and Rome, but different attitudes towards the ways of both making and achieving enduring monuments.

Mote viewed that the past could be scrutinized continuously as recorded in words, instead of stones. He stated that China kept a very large and long-enduring of mankind's documentation of the past, and it repeatedly scrutinized that past as recorded in written words, and caused it to function in the life of its present. One illustration of this could be explained in this way the local history demonstrated the physical parts of a city. Sections of those works called “historical outline” or “establishment and construction” described the history of the utilization of the site, and others titled “streets and lanes” “bridges and crossings” “residences and buildings” or “temples” or “historic remains” list all of the physical components of the city,

providing those items with their descriptions. Taking Nanjing for example, the earliest local gazetteer is *Jingding Jiankang Local Gazetteer* (《景定建康志》, *Jingding Jiankang Zhi*) which was published in the Southern Song Dynasty (1261) and records the natural environment, social culture and local public buildings, etc. Besides, *Nanking Past and Present Local Gazetteer* (《金陵古今图考》, *Jinling Gujin Tukao*) written by Qi Chen (陈沂) in the Ming Dynasty (CE 1516) is an initial local record which described the construction of Nanjing from the BCE 333 to the Ming Dynasty and the mapping of mountains around the city as well as the river system and bridges inside (Figure 2). Similarly, the *Local Gazetteer of the Capital City in the Year of Hongwu* (《洪武京城图志》, *Hongwu Jingcheng Tuzhi*) also recorded the physical parts of the city, with the mapping of mountains and river system, sacrifice places, bureaucratic buildings, temples and public buildings (Figure 3). Most of the historical construction and spaces that vanished with the subrogation and the erosion of time are recorded as hand drawings and narrative written words, so the local records and documentary sources are vital materials for the cognition issue of Chinese historical spaces. As Mote illustrated in his book the real part of the historical city in China is “a part of the mind, the only truly enduring embodiment of the eternal human are the literary ones” [12].

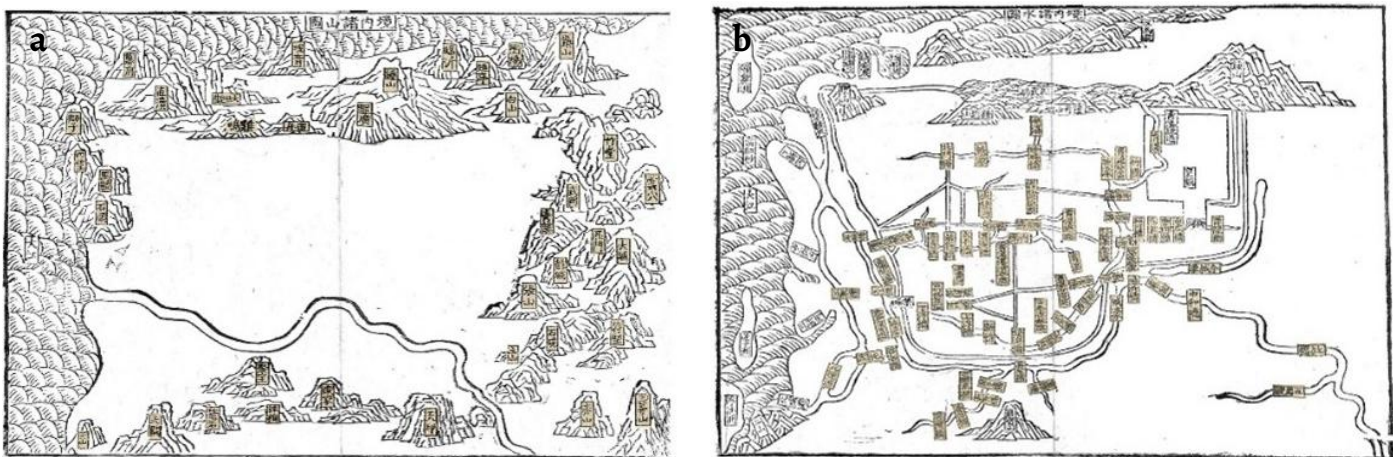


Figure 2. Mapping of Nanking in the Ming Dynasty: a) Mountains; b) River system [10].

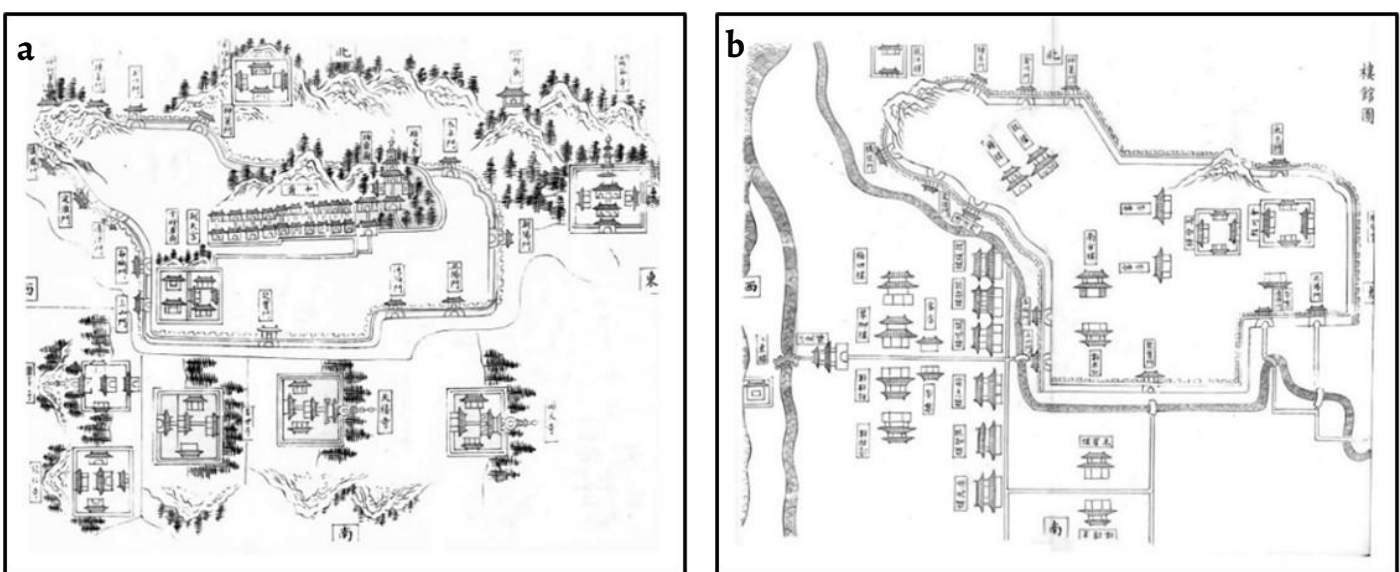


Figure 3. Mapping of Nanking in the Ming Dynasty: a) Temples; b) Public buildings [11].

Therefore, it is significantly necessary to understand and cognize the Chinese historic urban environment from both the tangible dimension and the intangible dimension, which is the historical information and narration from the documentary sources, and to regard historic urban space as a unity of material forms and humanistic spirit. “Since the written word and place-related narrative were more important than real sites, buildings and their physical relics, the past was and is still perceived as a space of the mind, rather than as a space of stones” [4]. Consequently, the study of historic space should include together with buildings, traces, absences and the intangible dimension.

Consequently, historical urban space in the traditional Chinese context exhibits a distinctive cultural logic: space exists first and foremost as a system of narratives rather than as a mere aggregation of material objects. This observation indicates that the study and interpretation of Chinese historical urban environments must move beyond a purely object-centered perspective, and instead regard architecture, ruins, and even physical absence as integral components of historical space. Only through such an approach can we grasp the essential unity between material transformation and cultural continuity that characterizes China’s urban historical experience.

Lost of the local identity

“Same image of the cities” indicates the homogenization of the urban appearance and experience [13]. It has been criticized in urban and rural planning and architectural design, which is a serious problem in the development and transformation of urban settlements in the twenty first century in China. This problem exists not only in new urban construction but also in the renovation of historic cities. Since the 1980s, during the formulation and implementation of urban planning, lots of historic urban areas have undergone large-scale renewal and transformation, sometimes even becoming unrecognizable, without in-depth research into their historical evolution and traditional features [14]. Furthermore, either the historic urban areas that were involved in the tide of preservation and regeneration after urbanism, or the cultural and creative industry parks that were transformed from repurposed factories, warehouses, docks, and even traditional residential buildings, historic urban spaces are transformed into the places and landmarks for working, residence and tourism by the stakeholders because of their historic values which representing as distinctive façades, and specific historical background and historical narrative element.

Apart from the reasons related to political policies and economic development, cultural elements stand out as vital catalysts, serving as the core tools in the formation process of identity, sense of place and landmarks. However, only depending on the vague cultural planning program still presents lots of problems. Among them, creating the sense of place that is formed through community interaction becomes a challenge for spatial managers due to the protracted cycles and overly intricate components, besides, the cultural and creative industry that relied on capital and commercial practices provides physically distinctive appearances, but often remains on a visual level and not evokes the localized history and memories that were initially anticipated [15].

Historic urban space could be regarded as a continuously evolving socially spatial entity and bears the imprint of various historical periods through a distinct transformation which in turn shaped the uniqueness of contemporary urban built environments. It is obvious that the uniqueness lies in the special site selection and natural environmental factors. The topographical elements, climate, and others have exerted tangible and intangible influences on the urban appearance, urban tissue and social-cultural factors through the millennia-long history of formation and development [16]. As a result, it inevitably gives rise to the core of urban development, giving shape to distinctive urban features.

The absence of personalized culture in the historic urban space erases the diversity inherent in the progression of human civilization. Cities need to be read thoroughly, and the intricacy and distinctiveness of each city require comprehension and respect. Historic urban space

serves as the place where individuals develop a sense of belonging and identity with uniqueness which coincides with the emergence of urban cultural characteristics. “Same image of the cities” could be attributed to the under-cognition of local culture, and the reconstruction of local identity should rely on the in-depth cognition of local cultural sources and involve the humanity dimension [17], but here is the dilemma of the cognition from the architectural field and other disciplines.

Previous research on the cognition of historic urban space in China could be classified into two main aspects including the architectural and urban planning field and other disciplines, such as historical geography, literature and history, etc.

The investigation and analysis of historic urban space by architects and urban planners mainly focused on the historic urban form and structure. In this context, historical maps and other relevant materials are analyzed and synthesized to extract information on historical urban form and structure. The research result can be used to establish the historic urban landscape system and inform subsequent urban design and planning, aiming to maximize the value of historical resources and establish the value assessment framework. Beyond the practical projects, digital tools such as Geographic Information Systems (GIS) and 3D modelling are employed to reconstruct historical urban space, to provide reliable data and technological support for the preservation and study of historical urban environments in the future. Additionally, some research is directed toward enhancing and evaluating spatial quality for the renovation and rehabilitation of historic urban space. A minority of studies have approached historical urban spaces by leveraging the historical culture and narrative aspects, constructing urban narrative networks to cognize historic urban spaces. However, most of them have not genuinely recognized and excavated the local identity inherent in historical urban spaces from the perspective of historical and humanistic perspectives.

On the other hand, within the realm of humanities disciplines, extensive research has also been concerned about historic urban space. The field of historical geography examines the foundation of urban emergence and developmental processes. It explores the relationship between historical urban structures and geographical situations, thus contributing to the rational layout of cities. Within the field of historical studies, research concerning historic urban space primarily focuses on urban history. These studies frequently refer to the distinctive history and culture of cities, clarifying and illustrating the valuable information relating to the historic urban areas during the developmental process. At the same time, a spatial turn has risen in the study of urban history gradually with the evolvement of the Geological Information System. Nevertheless, it is important to note that the research within urban history predominantly relies upon textual narratives and does not extensively engage in the analysis of physical spatial forms or other related elements of physical space.

The study of historic urban space necessitates interdisciplinary integration. The preservation of urban humanistic characteristics, history and memory needs extensive research in both historical humanities and historical spatial studies. The field of historical humanities brings a specialized advantage in the textual description of historic urban space, which primarily employs textual narratives to expound upon the evolutionary process of urban space. However, the limitation remains in the expression of the physical spatial form [18]. In recent years, with the application of historical map research and Historical Geographic Information Systems (HGIS) technology, new vitality has been injected into the study of historic urban space in the field of urban history, and the trend of spatial shift has risen [19].

Conversely, architecture and urban planning emphasize the analysis and expression of the physical form of historic urban space. However, their attention to the historical-humanistic dimensions of these spaces is comparatively limited. The necessity of greater focus on the evolution of historic urban space from the social, economic, and cultural perspectives needs the involvement of the clarification of historical documents and the excavation of historical-humanistic factors behind the spatial evolution [18]. Such efforts could contribute to the understanding of historical value in the urban space and the recognition of local identity.

Puyu Tang plot as an example

Brief introduction of the Puyu Tang plot

The case of the Four Halls of Puyu in the Mendong area of Nanjing provides a compelling empirical demonstration of this argument. The development of charity in China experienced several structural transformations. Since the Tang Dynasty (seventh-tenth centuries), official involvement in charitable affairs gradually expanded, while during the Ming Dynasty (fourteenth-seventeenth centuries), the weakening of state authority encouraged the rise of privately organized charity, particularly led by local gentry. This shift resulted in the Jiangnan region – China's most prosperous economic zone – becoming the most concentrated and developed area for charitable institutions in ancient China. This prominence is clearly reflected in quantitative evidence: between 1655 and 1742, at least 98 Yuying Tang and 5 Puji Tang were established nationwide, of which 51 Yuying Tang (52 %) and 3 Puji Tang were located in the Jiangnan region [20]. By the Qing Dynasty (seventeenth-nineteenth centuries) [21], government involvement once again intensified, and on the foundation laid in the Ming period, China's officially-supported charitable system reached its highest level of institutionalization and maturity, with the Jiangnan region standing at its core. Within this framework, Nanjing (Jiangning Prefecture), as the provincial capital of Jiangnan, received substantially stronger governmental support for the establishment and management of charitable institutions than other cities in the region [20]. Its charitable system was therefore more comprehensive, stable, and systematically organized, exhibiting a pronounced official character. The Four Halls of Puyu, which constituted the central government-sponsored charitable complex in Qing Nanjing, were established in the Mendong area. Their importance was formally documented in the *Record of the reconstruction of the Four Halls of Puyu* (Chongxiu Puyu Sitang Zhi), authored by supervising officials, and their location was prominently marked on late Qing historical maps. Within this framework, Nanjing (Jiangning Prefecture), as the provincial capital of Jiangnan, received substantially stronger governmental support for the establishment and management of charitable institutions than other cities in the region.

The Mendong area, which is valued for its traditional residential buildings dating back to the late Qing dynasty (approx. 1840-1912), gives Nanjing distinctive urban morphology and cultural characteristics. As the earliest official charity organization and educational institution in Nanjing, Puyu Tang (普育堂) and the other three institutions were established in the Mendong area in 1733, which can be viewed as quite important existence during the historical development of the Mendong area, as their information is recorded many times in the local gazetteer and historical maps (Figure 4 and Figure 5). However, the physical existence has already been demolished and replaced by other constructions. As the absence in the Mendong area, they can hardly be cognized. But their history and memory of them cannot be ignored, as one of the historical values and identities of the Mendong area.

This case vividly illustrates the vulnerability of physical space within Chinese historic cities: while material forms may disappear under the pressure of historical change and modern development, the intangible cultural memory they once embodied persists and remains socially meaningful. The Four Halls of Puyu thus serve as a critical example of how historic urban space in China must be interpreted through the combined lens of material absence and cultural continuity.

This paper will clarify the three periods of the morphological evolution of the Puyu Tang and the transformation of the roles that they played in this area, aiming to complete the overall cognition of the Mendong area.



Figure 4. Historical documents record the information of the Four Halls of Puyu: a) Jiangning prefecture rebuild Puyu Tang records (《江宁府重修普育堂志》), 1886; b) Record of the East of the city (《东城志略》), 1899; c) Map of Nanking relics (《金陵省城古迹全图》), the late Qing Dynasty.

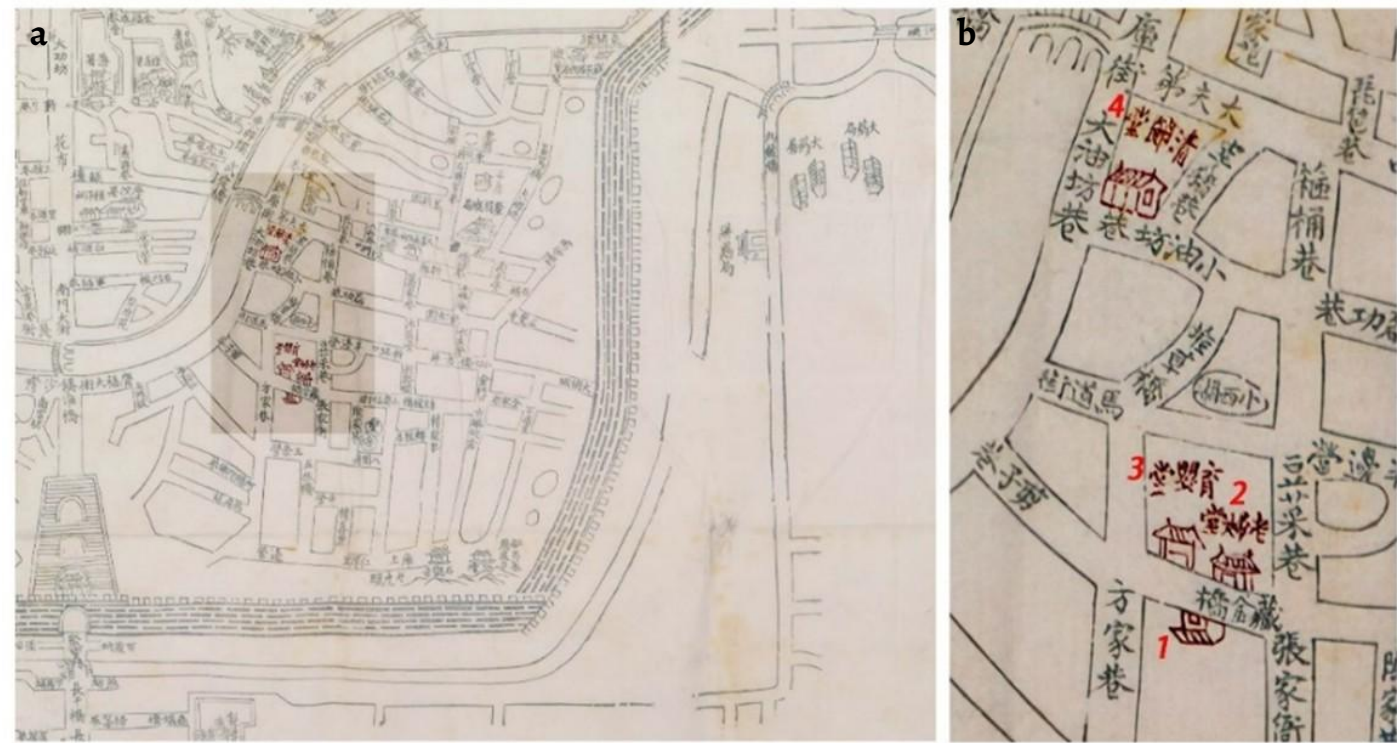


Figure 5. The reconstructed Four Halls of Puyu in the Mendong area: a) Location; b) Center detail: 1- Puyu Tang, 2- LaofuTang, 3- Yuying Tang, 4- Qingjie Tang (source: Map of Nanking Relics (《金陵省城古迹全图》), the late Qing Dynasty).

Puyu Tang is a charity established by the local government in the Qing dynasty, with the main aim to provide accommodation for the poor and raise orphans respectively. Generally, Puyu Tang contains two agencies, both Puji Tang (普济堂) and Yuying Tang (育嬰堂), at the same time. In 1724, Puji Tang and Yuying Tang were first established in the capital city, and then it was followed by each province in succession. In 1733, Hongen Zhao (赵宏恩), the Governor of the Liangjiang area (两江地区) which includes Jiangsu Province today, established the Puyu Tang in Jiangning Prefecture, and Jiangning Puyu Tang also is the earliest official charity organization in Nanjing.

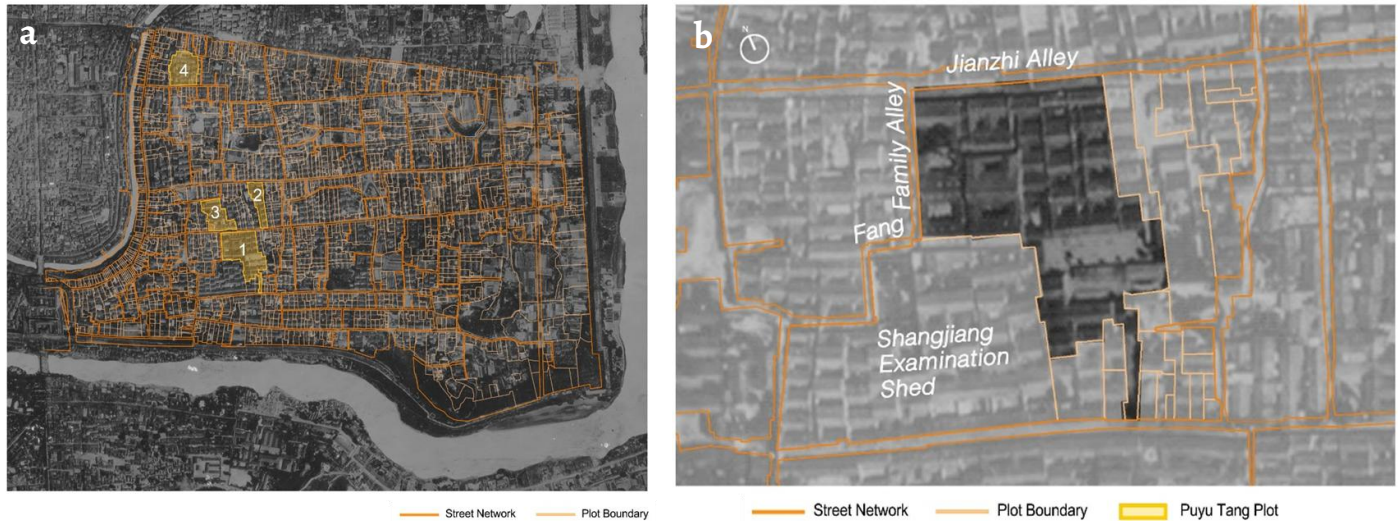


Figure 6. Mapping of the plots of the Four Halls of Puyu in the Mendong area: a) Plots of the Four Halls of Puyu: 1- Puyu Tang, 2- LaofuTang, 3- Yuying Tang, 4- Qingjie Tang; b) Puyu Tang plot (source: Nanjing Aerial Map in 1929 overlapped with the Cadaster Map in 1936).

Initially, Puyu Tang was built in an obsoleting private garden outside the city wall and included two sub-agencies: Puji Tang for the elders and the disabled, and Yuying Tang for the orphans. However, in 1853, the buildings were demolished due to the Taiping Rebellion. Therefore, the Jiangning prefect rebuilt Puyu Tang in the Mendong Area, precisely, at the south of Jianzi Alley (剪子巷, Scissors Alley). The construction project of PuyuTang has gone through three phases including twice expansions and formed the original building layout and plot boundary eventually (Figure 6). The second phase of the Puyu Tang plot is the Nanjing Municipal Almshouse. After the establishment of the Republic of China in 1912, the government reorganized the administration of all separate almsgiving agencies and updated it to Nanjing Municipal Almshouse, which originated from Puyu Tang in the Qing Dynasty, in 1929, and expanded the almshouse to another two places in Nanjing. The aim of the Municipal Almshouse in Jianzi Alley was changed to mainly support the elders and the disabled, and provide a workhouse for homeless people [22].

In 1951, the utilization of this plot was transferred to the Weaving Factory which was affiliated with Nanjing Almsgiving Institute and then transferred to Nanjing Yarn-dyed Factory (南京色织厂) in 1981 eventually after a series of reorganizations. During this period, the original buildings of Puyu Tang, which used to be residential buildings, inside the plot were transferred to the factory buildings. In 2011, under the background of the renovation project of the Mendong Area, the historical buildings of the Nanjing Yarn-dyed Factory were renovated into the Jinling Art Museum as the industrial heritage, with remaining industrial-period morphology (Table 1).

Table 1. Development of Puyu Tang plot.

Time	Utilization	Event	Background
1865	Jiangning Puyu Tang	Reconstruction	Taiping rebellion
1929	Nanjing Municipal Almshouse	Reorganization	Establishment of the Republic of China
1951	Weaving Factory (Affiliated to Nanjing Almsgiving Institution)	Industry related to the original weaving workhouse	Priority of the industrial development
1981	Nanjing Yarn-dyed Factory	Industrial promotion	Reform and opening-up policy
2011	Jinling Art Museum	Renovation	Renovation project of the Mendong area

Morphological evolution of the Puyu Tang plot

The paper intends to explore the evolutionary process of the Puyu Tang plot into two periods according to the morphological transformation from 1865 to 2011. The first period (1865-1951) contains two phases: Jiangning Puyu Tang and Nanjing Municipal Almshouse, and the second period (1951-2011) contains three phases: Weaving Factory, Yarn-dyed Factory and Jining Art Museum. Besides, the Nanking Aerial Map taken by Aircraft Squadrons United States Asiatic Fleet in 1929 and the Nanjing Cadaster map drawn by the Nanjing Land Management Bureau in 1936 are the earliest maps that show the road system and urban tissue clearly. Considering the time of the two maps are quite close, their overlapping could provide information about the street system, plot, and the roof of the building object.

Phase I: Puyu Tang, 1865

The earliest map showing morphological information is the Nanking Aerial Map in 1929, but the rebuilding of Jiangning Puyu Tang started in 1865, so the author has to refer to other materials. *Jiangning Prefecture Rebuilding Puyu Tang Records* (《江宁府重修普育堂志》) is the official local records edited by Zongying Tu (涂宗瀛), the Jiangning prefect, who was in charge of the reconstruction of Puyu Tang in 1865, with recording the rebuilt project and development of Puyu Tang, including the hand drawings. Based on the written words and the drawings, the reconstruction process could be clarified. Therefore, the Records could be a clue, and also a tool, for understanding the morphological transformation of the Puyu Tang Plot before 1929. Through a rough comparison, the morphology of the Puyu Tang plot in 1929 could correspond to the buildings of Puyu Tang recorded. Hence, the morphological evolution process could be analyzed.

The plot boundary in the cadaster map was the final result of the continuous construction of Puyu Tang, so the morphological evolution of Puyu Tang could be deduced according to the written records. The construction process of Puyu Tang could be illustrated as three stages (Table 2) based on three-times expansions. In 1865, the local government bought several sites and houses of local families to build the new Puyu Tang in Jianzi Alley, and in 1869, the boundary of Puyu Tang expanded continuously. The houses of the Zhang Family were transferred to the new buildings of Puyu Tang, and in 1875 the site nearby was constructed as a yard. Then in 1885, the houses of the Li family were finally included in the Puyu Tang plot. The morphology of the Puyu Tang plot presented traditional residential buildings, small-scale spaces and continuous courtyards, and the plot boundary was formed basically (Figure 7).

Table 2. Construction process of Puyu Tang.

Time	Original ownership	Boundary
CE 1865	The site of the Niu family	North: Jianzi alley South: <i>Shangjiang Examination Shed</i> (上江考棚) West: Fang Family alley East: Houses of Li family
CE 1869	Houses of the Zhang family and the site of the Wang family	North: Jianzi Alley South: Houses of Li family West: Houses of Li family East: Houses of Tang family
CE 1885	Houses of the Li family	North: Jianzi alley West: Puyu Tang East: Houses of Li family

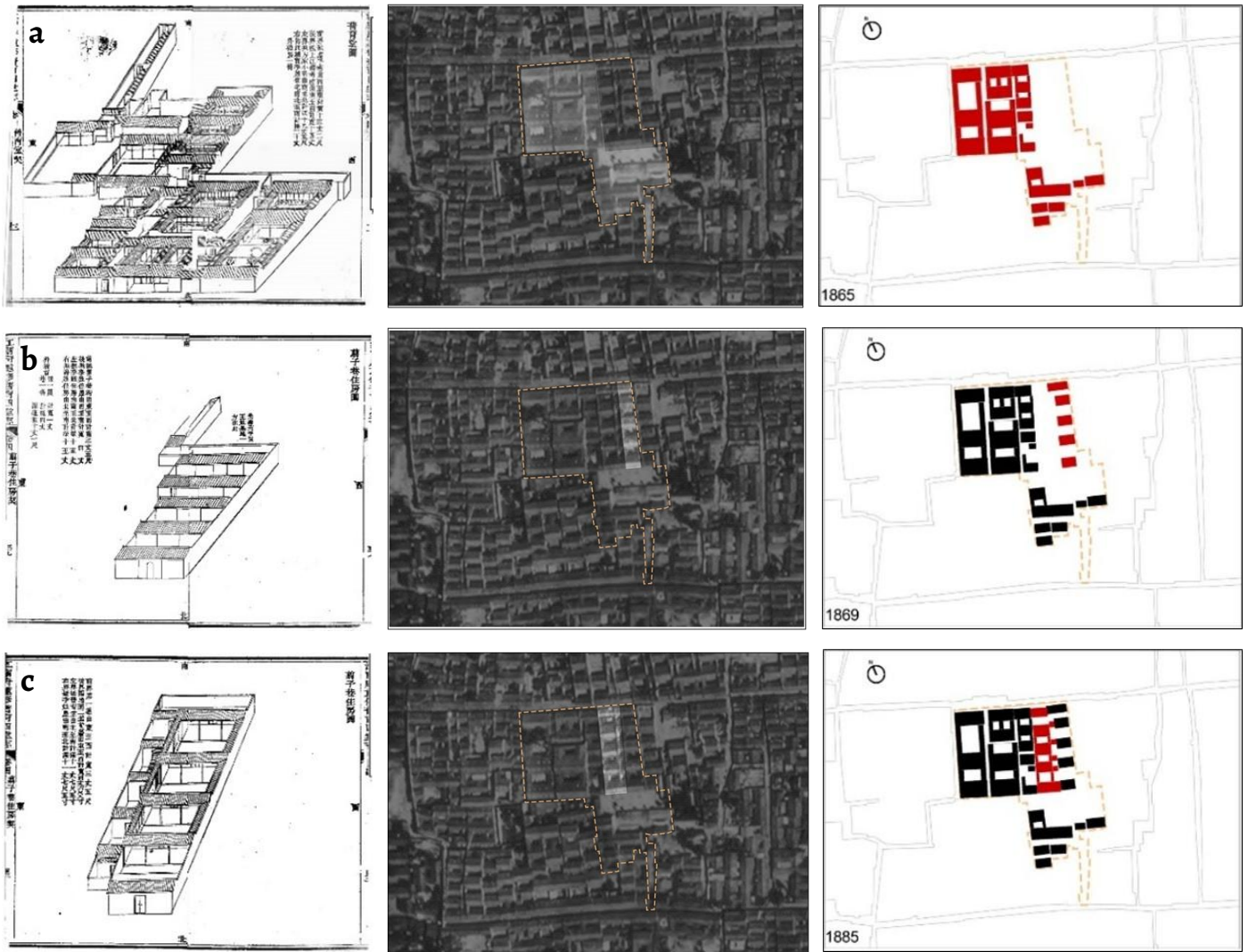


Figure 7. Mapping of the morphological evolution of Puyu Tang before 1929 (attached figure in the record – left column, location in the *Mendong* area – center column and morphological map – right column): *a*) re-establishment of Puyu Tang in the *Mendong* area in 1865; *b*) the first expansion of Puyu Tang in the *Mendong* area in 1869; *c*) the second expansion of Puyu Tang in the *Mendong* area in 1885. Source: partly based on the Nanking Aerial Map in 1929 and the Nanjing Cadastral Map in 1936, elaborated by the authors.

Phase II: Nanjing Municipal Almshouse, 1929

After the government of the Republic of China was established, the Jiangning Puyu Tang was officially reorganized as Nanjing Municipal Almshouse in 1929. Although the local government enlarged the scale of the Municipal Almshouse and constructed new buildings in other places, the Municipal Almshouse in Jianzi Alley remained a partially relieving role. Besides, compared with Puyu Tang in the Qing Dynasty, the Municipal Almshouse in Jianzi Alley started the female workhouse for skill training in 1930, and the techniques included sewing, knitting, and embroidery [23]. During this period, the original buildings of Puyu Tang remained generally according to the Nanking aerial map.

Phase III: Weaving Factory affiliated to Nanjing Almsgiving Institution, 1951

Under the background of developing industry was given priority after 1949, the Puyu Tang plot finally finished the almsgiving role and was transferred to the weaving factory, keeping the industrial continuity. According to the aerial map taken in 1977 (Figure 8a), the morphology of the plot has totally changed from the traditional small-scale residential spaces to industrial spaces. The three main factories were typical light industrial buildings with wooden zigzag roofs. Compared with the original Puyu Tang plot, the plot boundary expanded towards the

west, which partially belongs to Fang Family Alley and the southwest corner original *Shangjiang Examination Shed* (上江考棚) plot, and the original south alley disappeared.

Phase IV: Yarn-dyed Fabric Mill, 1981

After several industrial reorganizations, the original Weaving Factory was transferred to the Nanjing Yarn-dyed Fabric Mill in the 1980s. Due to the expansion of the production scale, the two buildings were reconstructed in 1981 respectively (Figure 8b), and their structures were transferred to the reinforced concrete frame structures. Besides, the other factory retained the zigzag-shaped roof but was re-constructed with reinforced concrete in 1971 (Figure 8a-b). The morphology of this plot kept changing because of the continuous reconstruction.

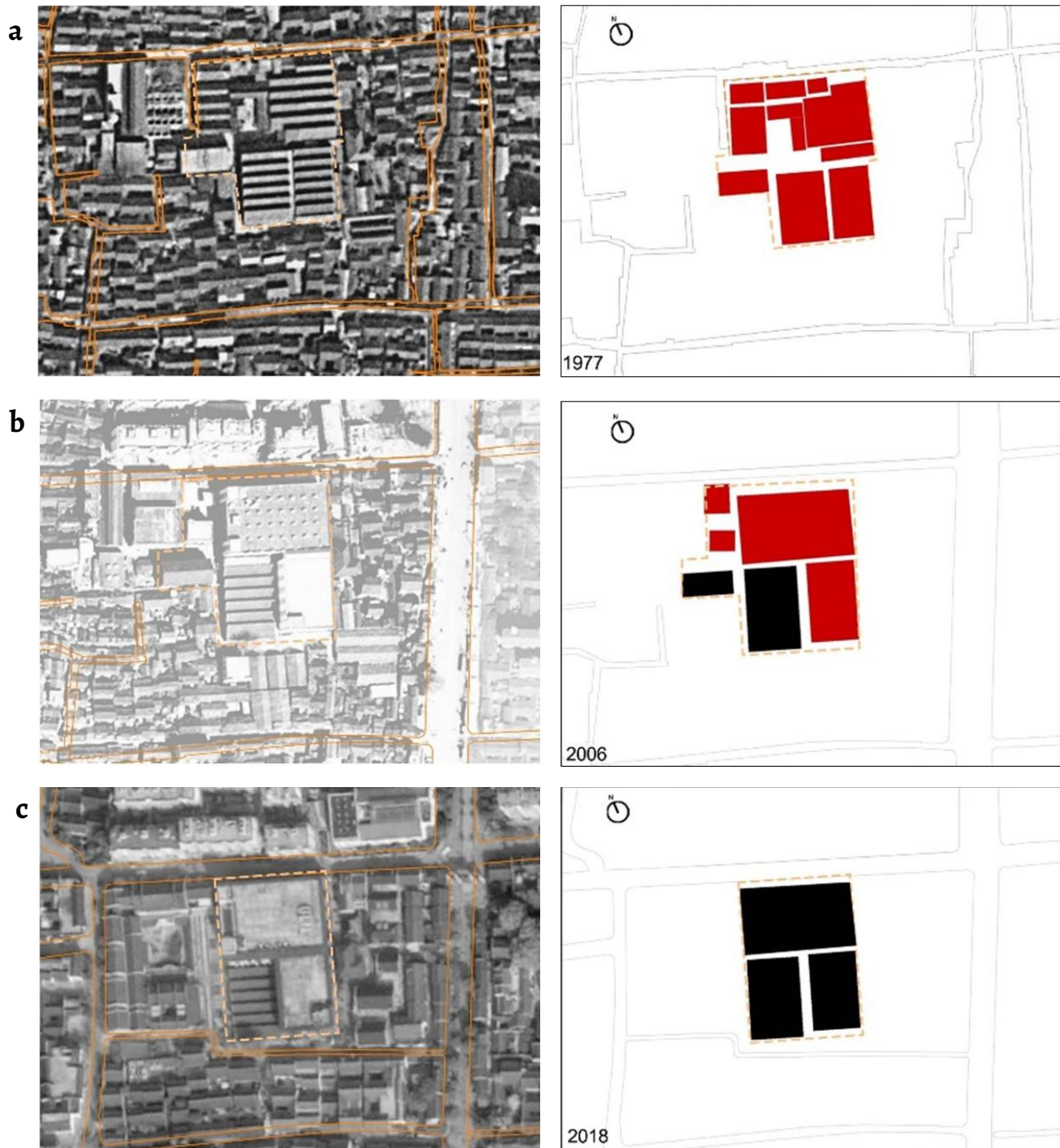


Figure 8. Mapping of the morphological evolution of Puyu Tang plot after 1951 (aerial map – left column and morphological map – right column): a) Weaving Factory Affiliated to the Almsgiving Institution, 1977; b) Yarn-dyed Fabric Mill, 2006; c) Jinling Art Museum, 2018 (source: Partly based on the 1977 aerial map from USGS, 2006 Google Map and 2018 Google Map).

Phase V: Jinling Art Museum, 2011

Regarding the expansion of the industrial scale and the priority of living environment protection at the end of the twentieth century, the factories established inside the historic city were required to move to the suburban area. Besides, the conservation planning of the Mendong Area started in 2010, and the original factories, as the industrial heritage of the 1980s, were transferred to the museum. The industrial buildings remained, but by inserting the translucent skin as the new façade, the new design reorganized the inner space and circulation (Figure Figure 9). During this period, the utilization of buildings changed but the main building object survived, therefore the morphology remained generally compared with the Yarn-dyed Fabric Mill (Figure 9).



Figure 9. Nanjing Yarn-dyed Fabric Mill: a) from the perspective of Jianzi Alley; b) view of the industrial buildings with the zigzag roof; c) Jinling Art Museum.

Discussion

The role that Puyu Tang played in history has vanished and now as the “absence” in this plot, it can hardly be cognized through the physical existence. But the history and memory of Puyu Tang cannot be ignored, as the vanished or erased historical urban space, should be recognized under the cultural and architectural background of physical impermanence in China. Considering Puyu Tang cannot be explored as the physical absence in this plot anymore, this paper unfolds the investigation to clarify the historical space and morphological evolution of Puyu Tang through the collection of historical information which mainly includes local records and historical maps, etc., and also to clarify the narration of this plot, aiming to complete the evolutionary process and reason behind. And the paper tries to establish the cognition method that morphological analysis, at the tangible level, and historical information, at the intangible level, are integrated as a unity, for the erased and missing historical space during urban development in China.

But both the situation of physical impermanence in the Chinese traditional architectural context and the blind demolition of urban development result in the “absence” in the historical layerings of urban space, and the “absence” can be understood in terms of literary sources rather than physical remains considering that the past is primarily a past of literary memory and mind, not of buildings [4]. Moreover, the historical layerings including the absence and the remains constitute the overlapping of the historic urban space during the morphological evolution process. It is necessary to establish the stratigraphic analysis to read its historical layerings for the overall cognition of the historic urban space, and the comprehensive understanding can be the basis for the interpretive design in the future.

Conclusion

The evolutionary trajectory of the Puyu Tang plot provides a concrete empirical confirmation of the theoretical framework advanced in this study. Under the influence of social

transformation, the site has undergone continuous morphological change and shifting identity. Following the construction of modern buildings, only limited material traces of Puyu Tang from the late Qing Dynasty remain, significantly constraining direct material-based interpretation of local history and collective memory.

This condition exemplifies the cultural logic identified in traditional Chinese historic space: material form is inherently discontinuous, while cultural meaning remains structurally continuous. Yet existing academic approaches continue to reproduce a disciplinary divide. Architectural and urban studies tend to prioritize the analysis of physical form, often neglecting the historical narratives and cultural memory that sustain spatial identity. Conversely, research in the humanities emphasizes documentary knowledge while insufficiently engaging with the material and spatial structure of the historic environment.

This study argues that such fragmentation obscures the fundamental nature of historic urban space. The unity of tangibility and intangibility, of material transformation and narrative continuity, constitutes the core mechanism through which historical urban identity is produced and sustained. Only by integrating architectural remains, spatial change, historical documentation, cultural memory, and even physical absence into a unified analytical framework can the true continuity and identity of historic urban environments be comprehensively understood.

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