Architectural Form as a Product of Systems Reinterpreting the Pagoda Across Cultural Contexts

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Abstract. This paper explores the relationship between architectural form and systems of production through a comparative study of the Porcelain Pagoda of Nanjing and the Great Pagoda of Kew. Although the structures of two pagodas are often understood as the same type through their similar appearance to multi-tiered pagodas, the study argues that such similarity does not necessarily mean direct imitation. The paper proposes that architectural form is fundamentally shaped by the material, institutional, and technical conditions it produced. By analyzing the two pagodas in terms of construction systems, material strategies, production processes, and architectural details, the result of the paper shows they emerge from different modes of production and architectural traditions. The Great Pagoda of Kew should not be understood as a simplified copy of the Porcelain Pagoda of Nanjing, but as a translation reconstructed through the constraints and logics of 18th-century British architectural practice. In this sense, the transformation of architecture does not mainly lie in the reference of style, but in a process of adaptation within specific construction and production systems. The paper argues that architectural form cannot be fully understood as a transferable visual image. Rather, it should be regarded as a product of a specific context, where local techniques, materials, and institutional frameworks play an important role in shaping form. This view shifts the analysis of cross-cultural architecture away from cultural comparative criticism and towards an understanding of architectural production.

Keywords: The Porcelain Pagoda of Nanjing, The Great Pagoda of Kew, Architectural Production

1. Introduction

The Great Pagoda of Kew are often researched with the Porcelain Pagoda of Nanjing because of the similar appearance. At first glance, the Great Pagoda of Kew seemed to imitate the form of the Porcelain Pagoda of Nanjing, suggesting a process of imitation or reference between different cultures. However, this interpretation may overlook a fundamental question: Is the architectural form shaped by the system on which its production depends?

The paper does not regard the similarity of the building as evidence of imitation, but starts form a different premise. The architectural form is fundamentally determined by the material, institutional, and technical systems of the contexts in which it is built. Although the two pagodas have some same characteristics in their form, they come from totally different construction traditions and production

method. This article raises a question: how is an architectural form reconstructed when it is transferred across different technological and institutional backgrounds?

By comparing the construction systems, material logic, production processes, and architectural details of these two pagodas, this paper believes that the Great Pagoda of Kew should be understood as a translation formed under the British architectural practice and logics in 18th-century but not a copy. Therefore, transformation of architecture may mainly learn from the style or appearance, but the process of adaptation within specific buildings and production systems cannot be ignored either. The Great Pagoda of Kew thus shows how architectural forms are reconfigured through local techniques, institutional frameworks, and architectural logics, producing a hybrid result that is structurally and materially distinct from its source.

The structure of this article is begun with describing the institutional and technological backgrounds of early Ming China and 18th-century Britain, and then compares and analyses their own architectural form, construction system, and material strategy. The last part discusses how differences in drawings can further reflect the different architectural thinking and space creation.

2. Backgrounds of architectural contexts

This part describes the different architectural backgrounds of early Ming China and 18th-century Britain, so as to build the frame for the style comparison next. The paragraph focusses on their institutional organization, construction process and materials by summarizing how the architectural form in each background is influenced by their own administrative systems and production systems

2.1. Early Ming Dynasty, China

In the Ming Dynasty The architectural style was formed under the background of institutional reconstruction and technological change. The main features are not only reflected in the structure and style of official buildings, but also in the strict hierarchical management system and material regulations.

In terms of the inheritance of constructional system, as the only empire after the Tang dynasty established by the Han Chinese that successfully reunified the entire territory, there was a deliberate negation of the official system traditions since the Liao, Jin and Yuan Dynasties. With Nanjing established as the capital in the early Ming Dynasty, official architecture was primarily constructed by craftsmen from the Jiangsu and Zhejiang Province. Its structural system both inherited and systematized the architectural developments of these two regions since the Song and Yuan dynasties [1]. After Emperor Yongle relocated the capital from Nanjing to Beijing, the architectural system developed in Nanjing was transferred to the new capital, where it was institutionalized as the official architectural framework of the Ming Dynasty and subsequently disseminated across the empire [2].

On the technical level, the architecture in the Ming Dynasty formed a stable structure through the column grid itself, weakening the construction logic that relied on Dougong to maintain overall stability since the Tang and Song Dynasties [3]. In terms of the color of architecture, taking the colored glazed roof as an example, the Ming dynasty clearly established yellow as the highest-ranking color, primarily reserved for imperial palaces, temple, and mausolea. Green and cyan occupied secondary ranks, while black was assigned the lowest status. The use of these colors in vernacular and lower-ranking buildings was subject to strict regulation and limitation [4].

Parallel to the system of construction and color was the strict institutionalized management over building materials. This hierarchical system was implemented in specific construction practices through the types, dimensions, and firing systems of components. Meanwhile, through the system of

imperial workshops and storehouses, the Ministry of Works exercised long-term and routinised control over building projects, material supply, and the deployment of craftsmen, ensuring that official architecture was no longer an isolated, project-based undertaking but a fully institutionalized product embedded within the nation level's administrative apparatus [5].

Overall, the political order, religious function, institutional norms and technical rationality in the architecture of the Ming Dynasty jointly shaped the architectural form of the Porcelain Pagoda of Nanjing in The Great Bao'en Temple. This further proves that this pagoda is not a simple or purely symbolic memorial building, but should be understood as a rational architectural product embedded in the institutional framework of the Ming Empire. In this sense, the architectural form of the Porcelain Pagoda of Nanjing is more like a material manifestation of institutionalized power and technical order.

2.2. 18th century, Britain

By the middle of the 18th century, the rapid expansion of London had transformed building from an individual construction activity into a systematic production process. Population growth, commercial expansion and the maturation of the land system meant that architectural practice was no longer dominated by a single design intention. Land entered the market through leasing mechanisms, capital organized construction, and craftsmen carried out the work. Therefore, the most of city contexts was not the result of individual architects' creations, but the outcome of the combined influence of economy and efficiency.

Therefore, the construction production of that period depended on a complex institutional structure, and its operation involved many roles, such as land owners, developers, surveyors and various craftsmen and workers. The architecture project was completed under the joint influence of contracts, financial mechanisms, and legal frameworks. In this social system, the plan of each floor, construction method, and material selection were all constrained by economic conditions and institutional norms. The work of architects and craftsmen was incorporated into a predictable and replicable production logic, so that creating a highly consistent and stable structural feature of the urban space [6].

It is against this institutional background that terraced houses became the main residential type in London. The construction of terraced houses relies on repetitive space units, including standardized bay, floor heights, staircase layouts, and shared walls between two buildings. This modular system still has a certain flexibility while ensuring the stability of structure and form. By adjusting the depth, internal layout and decorative details, different residences can adapt to varying usage requirements and economic conditions. Therefore, terraced houses should be understood as a kind of institutionalized spatial structure, which can be built and continuously used, renovated and reproduced over a long period of evolution, especially during the changes of era styles like Georgian, Regency, or Victoria [7].

However, this mature and efficient architectural system itself has, in an imperceptible way, formed certain limitations. As 18th-century British architectural production has become increasingly sophisticated in terms of its institutional, technical and economic aspects, its understanding and absorption of foreign architectural forms are often dominated by its own established logic. When confronted with architecture such as the Great Pagoda of Kew from foreign cultures, designers tend to translate them through familiar construction systems and spatial languages rather than truly delving into their original cultural and structural logics (See Figure 1. & 2.). In a highly institutionalized production environment, architecture has been incorporated into a system that pursues efficiency and economic rationality. Any attempt to deviate from the established

construction logic will significantly increase costs and uncertainties. So, in this case, an original and authentic version of the pagoda seemed to be 'unnecessary'.

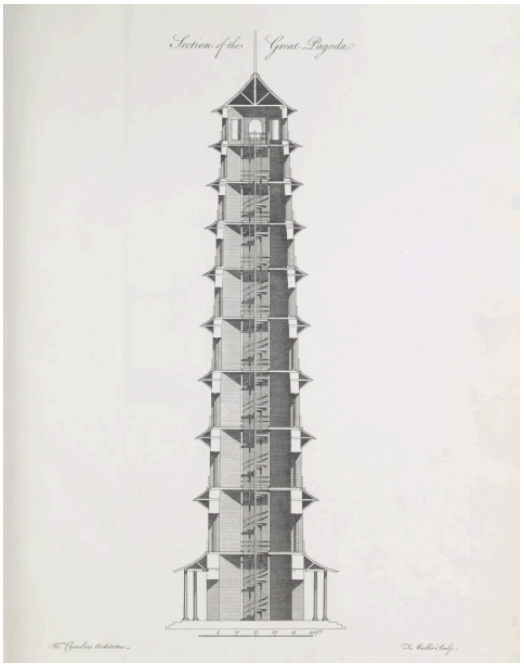

Figure 1. The Great Pagoda, from plans, elevations, sections and prospective views of the Garden Buildings at Kew, William Chambers (1763)

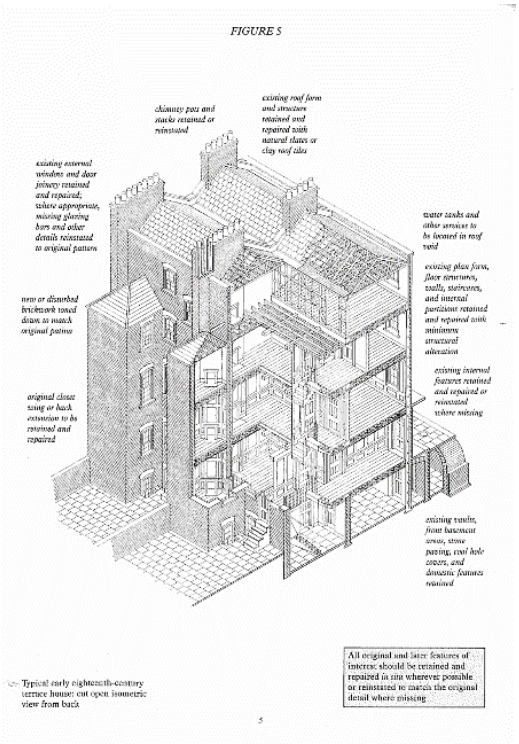

Figure 2. 18th century London Terraced Houses, photograph of London terraced houses reproduced from London terrace houses 1660–1860: a guide to alterations and extensions (p. 5), published by English Heritage (1996)

3. Sibling pagodas in different contexts: a comparative architectural analysis on the Porcelain Pagoda of Nanjing and the Great Pagoda at Kew Garden

The Porcelain Pagoda of Nanjing and the Great Pagoda at Kew Gardens in London stand as two of the most representative multi-tiered pagoda structures in their own cultures. Although they share a similar octagonal layout and vertical structure in appearance which may suggest a direct lineage or act of imitation, the architectural analysis reveals that they differ significantly in geography, historical period, and purpose, and more basically in construction methods, materials, decorations, and spatial function.

3.1. Introduction of the programs

The Porcelain Pagoda of Nanjing, located on the lower reaches of Yangtze River in China, served as the central structure of the Grand Bao'en Temple. At the beginning of the establishment of Ming Dynasty, the original temple in this site had already been damaged by the war. In 1405, Emperor Yongle commissioned the Ministry of Works to repair the temple to honor his mother [8], but soon after, an unknown monk set the temple on fire. In 1412, the temple was rebuilt and renamed as The Great Bao'en Temple (大报恩寺, Da Bao'en Si), literally means 'The Great Temple of Repaid Kindness'. The entire construction process of this temple took 19 years to complete. It was one of the tallest Buddhist pagodas at that time with nearly 80 meters tall and nine floors [9]. The pagoda adopts an octagonal base and a tapering vertical profile. The brick masonry and adorned with high-fired glazed tiles shows it combined structural resilience with rich symbolic expression. The pagoda fulfilled both ritual and spatial functions, guiding devotees through its layered proportions and sacred architecture as a Buddhist reliquary (See Figure 3.).

The Great Pagoda of Kew located in the Royal Botanic Gardens of southwest London that houses the 'largest and most diverse botanical and mycological collections in the world'. The pagoda was designed by Sir William Chambers and completed in 1762. The structure stood 50 meters (164 ft) from base to highest point and consisted of ten floors [10]. It shared an octagonal footprint and featured broader and flatter proportions. The structure was built in only six months using timber framing and brick infill, reflecting Georgian construction priorities of speed and formal clarity. The Great Pagoda of Kew performs a purely visual role in the garden, lacking the symbolic programming of its Eastern counterpart. The pagoda was never intended for religious use, but served as a picturesque feature within the landscape garden (See Figure 4.).

Figure 3. Great Bao'en Temple Museum in Nanjing

Figure 4. The Great Pagoda of Kew

3.2. Structure and material

The Porcelain Pagoda was built on a rammed-earth and stone foundation platform, which has been carefully designed to withstand seismic stress and support the huge vertical load [8]. Structurally, it followed a composite system. The load-bearing structure primarily comprises solid brick masonry walls, with the exterior facade clad in high-fired glazed ceramic tiles. These tiles were not decorative but contributed to structural reinforcement. Timber was used internally for floors and staircases to reduce weight. Standing 80 meters tall with 9 floors, the pagoda tapered elegantly toward the top. Its roof was supported by intricately layered timber brackets (dougong). Some porcelain bricks used in the pagoda exceeded 50 centimeters in thickness and weighed up to 150 kilograms, which is a scale of craftsmanship that modern craftsmen struggle to replicate [11]. The integration of structure and ornament allowed for both physical durability and spiritual significance.

However, the Great Pagoda of Kew employed a lightweight brick-and-timber system. The external load-bearing walls were made of uniform red bricks and timber was used for the floors and staircases inside [10]. Unlike traditional Chinese bracket sets or structural ornamentation, the pagoda used no internal columns or complex jointing. The 50 meters tall structure consists of ten stacked levels with identical octagonal plans. The roof structure was formed with wooden trusses supporting the polygonal cone roof. Notably, no porcelain cladding was used and most of the ornamental elements, including the stylized dragons added in modern restorations, were non-structural. The Pagoda was completed in six months, reflects the already mature construction system within the British architecture industry at the time. The pagoda primarily demonstrates a decorative function rather than a further exploration of concept. As part of the 18th-century English landscape gardens, the Great Pagoda of Kew places greater emphasis on formal clarity and visual magnificence, rather than religious symbolism or structural monumentality.

3.3. Architectural details and decorations

This part will show the architectural details and decorations of the different building elements such as walls, roofs and floors of these two pagodas for subsequent comparison.

3.3.1. Elements on the wall: door and window

The Porcelain Pagoda of Nanjing featured an octagonal plan with four sides on each level containing real windows and doorways. The other four displayed false openings to create a rhythmic visual pattern and an illusion of rotational dynamism. Four directions were marked by main entrances framed with glazed tile arches intricately decorated with dragons, lotus-bearing white elephants, winged rams caught mid-leap, and crouching lions at the base of the pagoda [12] (See Figure 5.). The remaining four faces presented carved images of the Four Celestial Kings, completing the sacred visual program. The actual window openings were relatively small and functional, designed for ventilation and minimal light, reinforcing the pagoda's contemplative and spiritual atmosphere rather than providing expansive views.

Figure 5. Porcelain Door of the Porcelain Pagoda of Nanjing, The Great Bao'en Temple Ruins Museum

The Great Pagoda of Kew employs a distinctly visual and symmetrical approach to its door and window composition. Each level features four arched windows, with elongated proportions and rounded tops. These openings are framed in timber and glazed with glass, ensuring ample interior lighting and a clear line of sight from each level. The entrances are simple rectangular stone portals, devoid of symbolic decoration, emphasizing accessibility and aesthetic clarity rather than ceremonial function. The windows do reflect a consistent facade composition and geometric regularity, which highlight a design logic rooted in visual balance rather than symbolic hierarchy.

3.3.2. Elements on the roof: brackets (dougong), ridge decoration and wind bell

The roof structure of the Porcelain Pagoda of Nanjing connects its brick pagoda body to the overhanging roof eaves through a system of glazed ceramic brackets (dougong). Each of the eight eaves on every level is supported by ceramic components, creating a unified architectural solution that combines structural support with ornamentation. These brackets are ceramic reproductions of traditional Chinese timber dougong, kiln-fired at high temperatures and assembled in modules. The outward-curving flying eaves enhanced the sense of layered volume and formed a progressively receding profile as the pagoda rose upward.

In terms of decorative ridge ornaments, the Porcelain Pagoda follows strictly to the symbolic system of traditional Chinese architecture and Buddhist iconography. At the corners of each roof, glazed ceramic Wenshou (mythical beasts) were installed with phoenix-riding immortals, dragons, phoenixes, lions, and Chuishou (another mythical beasts), all serving apotropaic functions. These ornaments were glazed and high-fired, stylistically consistent with the colored ceramic tiles of the pagoda's surface. The figures were typically reserved for imperial architecture. 152 bronze wind bells were suspended at the corners of ridges. They echoed in harmony with the 144 oil lamps inside the pagoda, making the pagoda appear to radiate light and sound from a distance [8].

The Great Pagoda of Kew in London adopts a wooden roof system, composed of simplified timber floor plates and projecting wooden beams at the eaves. Each tier slightly overhangs the one below and then recedes inward, creating a clearly stepped silhouette. On the facade, these projecting elements and the roof structure form triangular profiles, which are clad in regularly painted timber boards. The boards are alternately painted in black and white, seemingly designed to produce a rhythmic visual effect of layered projections when viewed from a distance, which basically is an aesthetic imitation of the stepped appearance of Chinese brackets (dougong) (See Figure 6.). While it evokes a layered aesthetic and lacks the complex load-bearing logic of traditional Chinese bracket systems and instead serves to emphasize the geometric order and visual rhythm of the facade. So, the surface was originally not decorated with any 3D elements, relying on symmetry, proportion, and exotic silhouette to evoke an 'Chinoiserie' appearance.

Figure 6. Detail of Great Pagoda of Kew, Historic Royal Palaces

At the corner of each octagonal roof, a fire-breathing dragon is installed as a decorative ridge beast. These dragons are modeled after creatures from Western mythology, with exaggerated expressions and tongues extended from open mouths. The original versions were gilded wood carvings painted in vibrant colors and designed for dramatic visual impact. In recent restorations,

these dragons have been reproduced using 3D printing technology with lightweight materials. This will make them easier to install and maintain while preserving their original aesthetic form [13].

3.3.3. Elements on the floor: handrail and paving pattern

The handrail and floor design of the Porcelain Pagoda of Nanjing reflect a strict hierarchy and ritual order, which originated from religious ceremonies. The railings are made by solid brick and stone and arranged in a symmetrical octagonal layout. They are decorated with glazed tile carvings featuring Buddhist patterns and was mainly in yellow glaze, symbolizing the fusion of power of emperor and the sanctity of Buddhism. The surrounding floor was paved with geometrically arranged stone slabs and designed to support ritual circumambulation and ceremonial movement, representing the integration of spatial function and religious symbolism.

The Great Pagoda of Kew in London adopts a design aligned with 18th-century British garden architecture and focuses on visual rhythm and geometric clarity. The handrails are made by lightweight painted timber in white, forming a symmetrical octagonal loop around the pagoda. Composed of slim balusters and horizontal rails, the structure is spatially open and visually permeable. The intervals between each section are uniform and aligning precisely with the height of the arched windows to reinforce a sense of vertical continuity. The paving is made of pale stone arranged in a circular form, imitating the layout of Chinese garden structures but lacking ritual function, which is serving instead as an ornamental element in a fabricated imagination of China.

3.4. Comparison based on drawings

The part focuses on comparing architectural representation by drawings, because the drawings can often be able to reveal the aesthetic preferences and cultural differences across different centuries in a more direct manner. They make visible different attitudes towards drawing techniques and points of representation. These aspects indirectly reflect realities of the architecture industry in the two regions under their respective contexts, such as the material conditions and professional practices.

Especially, after the Nanjing Great Bao'en Temple was built. Because of the exquisite beauty of the porcelain pagoda, painters, craftsmen, even poets and litterateur from both China and abroad all made depictions of it. When the Great Pagoda of Kew was built, as a wonder of British landscape architecture, it was also depicted by many painters. Both of these two pagodas have been the subjects of many paintings by people. This part will present some images and focuses on finding the differences in the periods and different drawing techniques of the works depicting the Porcelain Pagoda of Nanjing by Chinese and Western painters.

3.4.1. Elements on the floor: handrail and paving pattern

During Ming Dynasty, Chinese people still used Jiechi (a parallel ruler comprises two straight edges affixed to two movable rods) and the multi-perspective representation for painting [14]. Figure 7 reveals that this drawing of the Porcelain Pagoda of Nanjing is not only employed traditional Chinese painting techniques but also meticulously recorded the purpose of its construction, its dimensions and details, even down to the size and weight of each luminous gemstones used for decoration on both sides of the pagoda's body.

However, in 18th century Europe, western architecture was very familiar with the orthographic projection method for architectural drawing. Figure 8 presents a standard orthographic elevation projection. It not only closely matches the real structure in its form, but also includes a scale bar,

allowing to understand its real dimensions. Due to its rigorous drafting methodology, unlike Figure 7, this drawing simply labels the pagoda with the name 'Great Pagoda' without any detailed architectural annotations.

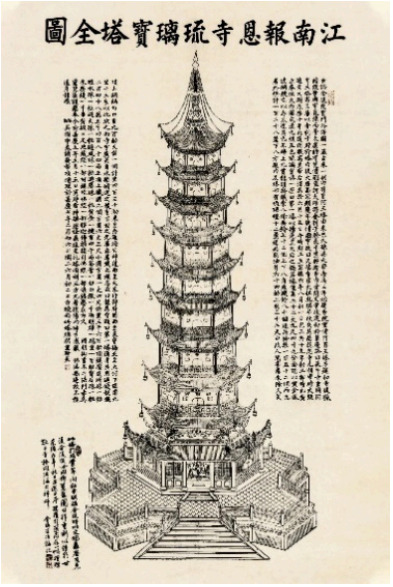

Figure 7. Whole view of Pagoda of the Great Bao'en Temple in Jiangnan (江南报恩寺琉璃宝塔全图,Jiangnan Baoensi liulibaota quantu), (Qing Dynasty)

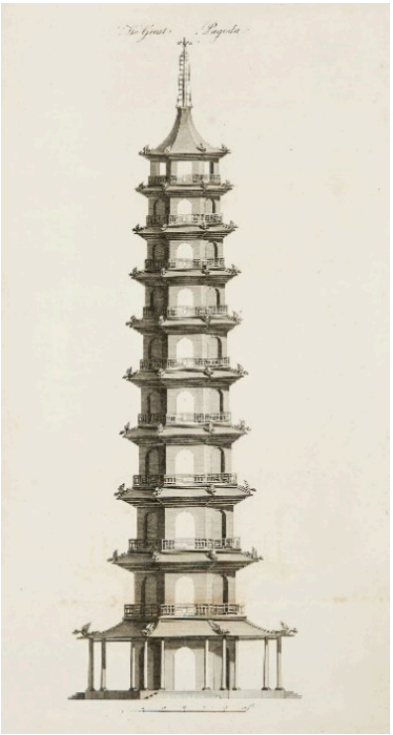

Figure 8. The Great Pagoda, from plans, elevations, sections and prospective views of the Garden Buildings at Kew, William Chambers (1763)

3.4.2. Comparison of drawings of Great Bao'en Temple and Porcelain Pagoda by Chinese and Western tourists

This part provides a panoramic view of the developing comment of travelers of the Great Bao'en Temple and the Porcelain Pagoda of Nanjing across different historical periods and regions as a better understanding of these two pagodas, which was from the late Ming Dynasty through the Taiping Heavenly Kingdom era (late 15th to mid to 19th century). It includes visual materials currently preserved in China, South Korea, the United Kingdom, and other locations.

Figure 9. The scene of the Joseon Envoys Returning from Nanjing (送朝天客归国诗章图, Song chaotianke guiguo shizhang tu,송조천객귀국시장도), now in National Museum of Korea, Seoul, (Late 15th Century, Ming Dynasty in China, Joseon Dynasty in Korea)

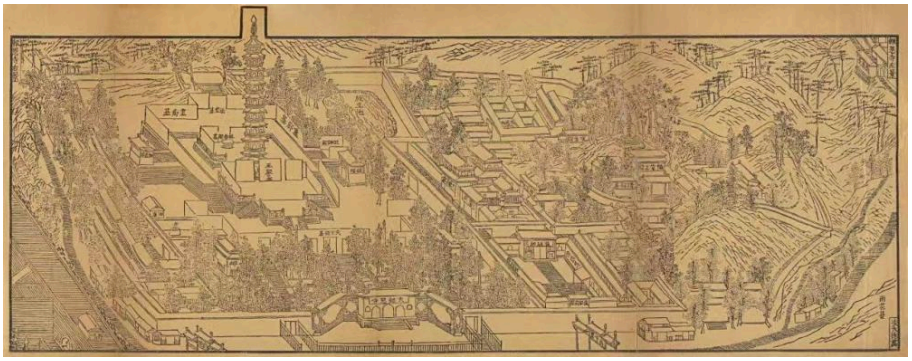

Figure 10. The view of Bao'en Temple, Jubao Mountain (聚宝山报恩寺全景图《金陵梵刹志》, Jubaoshan Bao'ensi in Jinling fansha zhi), Yinliang Ge (Ming Dynasty)

Figure 11. The pictures of Forty Scenic Spots in Jinling (金陵四十景图, Jinling sishi jing tu), Cen Gao (Qing Dynasty)

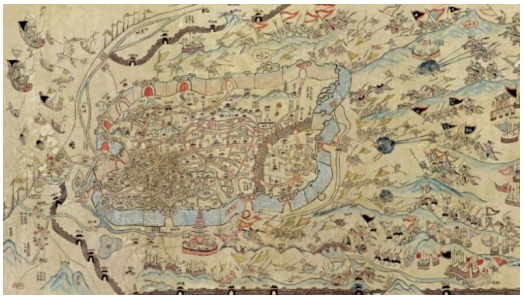

Figure 12. The picture of General Xiangrong's Jiangnan Army Besieged Jiangning. (向荣江南大营围攻江宁图, Xiangrong jiangnan daying weigong Jiangning tu), (Late Qing Dynasty, or Taiping Heavenly kingdom)

It is worth mentioning that there is a convention in China regarding the number of floors of a pagoda, which is generally an odd number from one to thirteen or even fifteen. This is because in the ancient Chinese theory of Yin and Yang[1], odd numbers represent Yang, symbolizing good fortune and life. The reason why the Great Pagoda of Kew has an even number of floors is that in the book by Nieuhof, The Porcelain Pagoda of Nanjing, which was painted by Western travelers, was always

[1] Yin and Yang with Numbers: In the theory of Yin and Yang, odd and even numbers carry symbolic meanings: oddnumbers are associated with 'Yang(阳)', emphasizing vitality and upward movement. Even numbers belong to'Yin(阴)', representing stability and support. Such concepts are often applied in the construction of traditional spaces,ritual systems, and architectural orders.

depicted as having ten floors (See Figure 13. & 14.), which is considered inauspicious in the context of Chinese architecture.

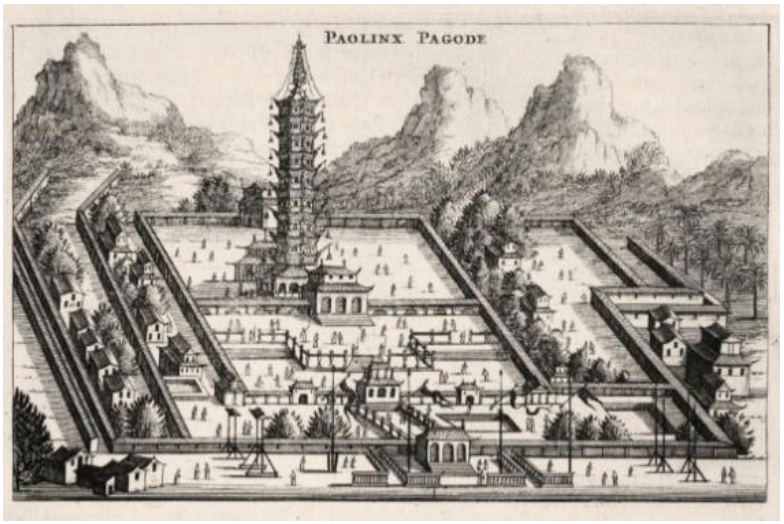

Figure 13. Paolinx and Porcelain Pagoda in Nanking, Johannes Nieuhof (1665)

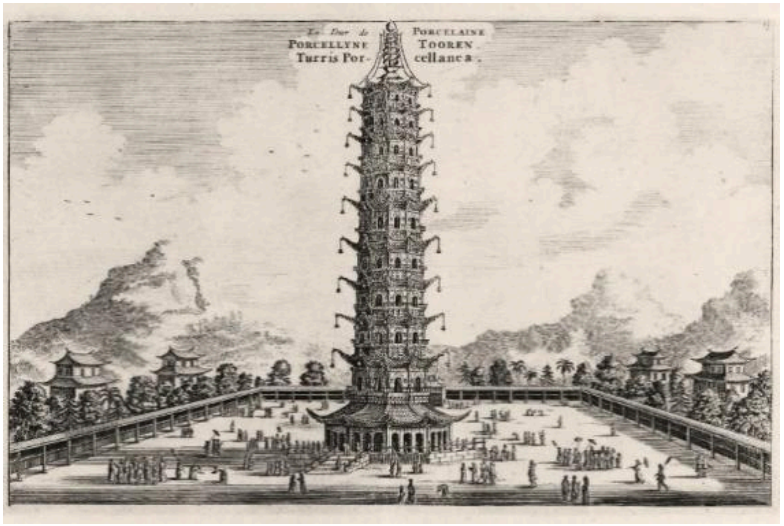

Figure 14. Paolinx and Porcelain Pagoda in Nanking, Johannes Nieuhof (1665)

Almost 200 years later, although The Chinese Empire, Illustrated, published in 1858, later represented the Porcelain Pagoda of Nanjing as a nine-floor structure (See Figure 15. & 16.), the publication appeared nearly a century after the construction of Great Pagoda of Kew, which means the publication could not have influenced the design of Great Pagoda of Kew [15]. Interestingly, according to the records of the Kew Garden itself, the Chinese sponsors of Kew Garden invited the monks from Nanjing to come to the pagoda for blessing.

Figure 15. Illustrations in The Chinese empire, illustrated, Thomas Allom (1858)

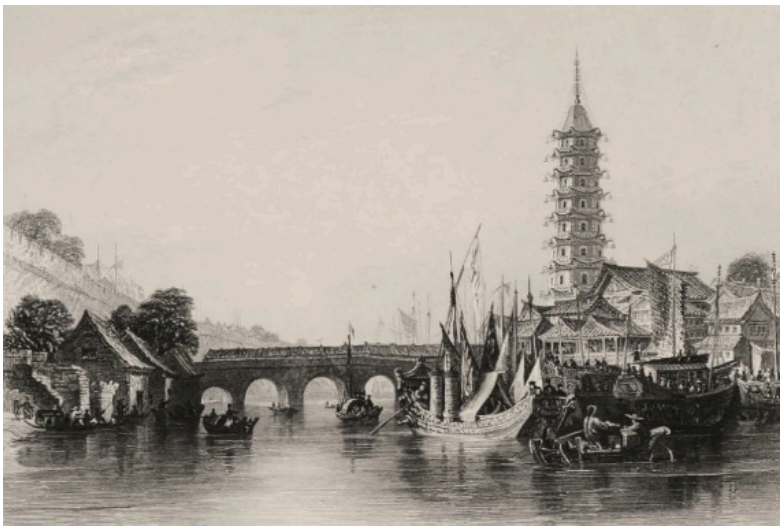

Figure 16. Illustrations in The Chinese empire, illustrated, Thomas Allom (1858)

By comparing the drawings of the Porcelain Pagoda of Nanjing and the Great Pagoda of Kew, the previous shows that architectural drawing is a visual expression method based on specific cultural and historical contexts in some extent. Chinese drawing integrates architectural forms with textual annotations and narrative intentions. The drawing combines the ritual principles with craftsmanship under the influence of multi-perspective representation and tradition of scholars. However, Western works focus on orthographic projection, measurable scales, and formal precision. It reflects a representational method in rationalization, standardization, and visual control. Taking painting as a way of comparison provides an indispensable background for the subsequent exploration of the connection between these two pagodas.

4. Conclusion and evaluation

The comparison between the Porcelain Pagoda of Nanjing and the Great Pagoda of Kew shows that the architectural similarity does not necessarily mean direct imitation. The similarity of these two buildings in visual form does not cover up their differences in architectural system, strategy on material, production process and architectural details.

According to the previous description, the Porcelain Pagoda of Nanjing was built in a highly institutionalized royal architectural system, which material specification, craftsmanship level, and symbolic hierarchy were closely integrated. In contrast, the Great Pagoda of Kew was created in the context of 18th-century British under the influence of the standardized construction methods, and economic efficiency. The transformation of the form is more constrained by the possibilities of the existing architectural system, which also means architectural transformation should be understood as a system-driven reconstruction. The Great Pagoda of Kew has been reconfigured through a different set of material, technical, and institutional logics, compared with the Porcelain Pagoda of Nanjing. The form reflects the internal coherence of the accepted system rather than faithful reproduction of the original work.

The study focuses on construction methods, material logics, and institutional framework, which helps to more accurately avoid misunderstanding similarities as the evidence of direct imitation. While the methodological focus also brings some limitations. By analyzing the architectural systems and construction processes firstly, the study sets the questions of cultural significance. Although it clearly explains how the similar architectural forms are reshaped at the material and technical levels in different contexts, it fails to explore how these forms are perceived, interpreted, or utilized in a broader cultural framework. The limitations show that a complementary research path is needed. Further research might consider how these same forms play a role as cultural representations shaped by perception, discourse, and power relationships. These points will help to have a more comprehensively understand of the architectural transformation.

In the end, the comparison also shows the architectural form is a transferable visual image as the product under the specific production conditions. They are reshaped by local architectural practices, available materials, and institutional framework when forms cross cultural and geographical backgrounds. The understanding of the process allows architectural analysis to move beyond the surface and toward a deeper recognition of the systems that create built form.

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