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Drawing the identity of architect: Liu Jipiao as an artistic architect in the late 1920s China



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KEYWORDS

Identity of Chinese modern architect; Architectural drawing; Artistic architect; Liu Jipiao; Multiple modernities **Abstract** This article investigates the responsibility of architectural drawing in developing the professional identity of modern architects in the late 1920s when Chinese architects started to emerge and assume the title of "architect." Using architectural drawing as both its subject and its method, this research interrogates how a representative figure — Liu Jipiao employed the power of drawing to establish the identity of the modern Chinese architect.

This paper argues that architectural drawing, in establishing the identity of the Chinese architect, faced the requirement to build an affinity between the architect and the artist. The entangled history of these two professions offers up Liu as the representative figure of the artistic architect. Liu's artistic drawing fulfilled the previously mentioned requirement and earned the architects the artistic power that distinguished them from their counterparts — the engineers.

Under the perspective of multiple modernities, the paper challenges the contemporary misreading of Liu Jipiao as an irrelevant individual intellectual and of his practice as a minor failure. Furthermore, this article invites further reflection on the modernity of Chinese architectural drawing, and shows how such drawing made more attempts to convey subjectivity rather than to transmit modern technique per se.

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1. Introduction

In the 1910s, as the new profession of architecture became gradually established in China, native Chinese architects, most of whom had received their training in foreign universities, started to perform in the Chinese architectural landscape as new intellectuals and professionals. However, these early Chinese adopters of the title "architect" struggled to establish their new identity within the Chinese architectural context, in which historically no such profession had existed. In fact, not all the Chinese intellectuals who adopted this new title would be recognized as architects today. Architectural drawing as a method has had a close association with the establishment of the professional "architect" throughout history. Architectural drawing in China, as the professional tool with which Chinese architects were equipped, therefore may have been the vehicle that gave rise to the new subjectivity, the projected authorship of the professional "architect". This article aims to investigate the projected modern subjectivity in Chinese architectural drawing, inviting the following questions. How did architectural drawing as a professional tool reflect the process of professional establishment in which the title of "architect" was earned rather than simply assumed? How did native Chinese architects establish their identity in the process of establishing themselves and producing their works in the early stages of architectural modernity in China?

Some research on the general history of Chinese architecture and architects has described the cohort of early Chinese architects and their education, practices, and ideology, establishing a general consensus on the situation facing architects in China during this important period (Lai, 2006; Xu, 2010; Lai et al., 2016). Several recent studies have started to answer the question of how this cohort of Chinese architects established their identity. For example, Xuan (2010), Lu et al. (2016) and Xing (2018) have focused on the publishing media the architects used to promote their identity. Xuan (2010) has highlighted the significance of art exhibitions and concluded that architects were distinguished from construction through their participation in art exhibitions and their close professional proximity to artists. Lu et al. (2016) has focussed on journals and exhibitions in the establishment of the architect, while Xing (2018) has concentrated on the figure of Liu Jipiao as someone who had more authority in art exhibitions because of his dual identity as artist and architect.

However, there has been comparatively little research on the establishment of the Chinese architect's identity, which presents a gap in field. First, while there has been research that values the different media (such as journals and exhibitions) that architects used to establish their identity, the most essential and frequent medium that architects used to transfer their ideas was the architectural drawing, which has been almost entirely neglected in academic research. Second, critical arguments have been weak or missing. For example, previous researchers have concluded that architects established their identity through close association with artists, which they achieved by participating in art exhibitions. However, this argument does not answer key questions, such as how this kind of

behaviour could establish the role of the architect, whether or not architects affiliated themselves with artists in order to separate themselves from construction, and how they separated themselves from artists to establish themselves as architects. Thirdly, research focusing on individual architects celebrated in architectural historiography always tends to strengthen a particular intellectual figure's intelligence and personal historical encounters in a hegemonic and heroic historical perspective, with a consequent lack of focus on the complex historical context that made these figures representative.

Bridging these research gaps, this article investigates the subjectivity of architectural drawing, on one hand, providing an enlightenment to understand the modernity of Chinese architectural drawing from the immaterial perspective, and on the other hand, interrogating the hegemony and singularity perspective of writing Chinese architectural modernity.

2. Methodology

The methodology of this article has three strings. First and foremost, this article uses architectural drawing as both the method and the subject. Architectural drawing has had a close association with the establishment of identity of the professional "architect" throughout the Western tradition. The first generations of Chinese native architects in the late 1920s had been equipped with modern drawings and this tradition by their modern architectural education. The potential of drawing to establish the identity of the architect by distinguishing architects from their main counterparts — craftsmen and painters — had registered in China then as well. Recognizing this potential is the first step to discussing the research questions.

Drawing distinguished the identity of the architect from the craftsman by being the intellectual tool used by the architect. Drawing was assumed to be an intellectual labour rather than manual labour, due to its association with scientific geometry (Kemp, 1990; Pérez-Gómez and Pelletier, 2000). Correspondingly, the emergent architects who worked remotely with drawing distinguished themselves as intellectuals, distinct from craftsmen who participated in construction on site (Forty, 2000; Kostof, 2000; Hill, 2005). Drawings carried the architect's ideas and instructed construction, which later evolved into the concept of "design" (Forty, 2000; Hill, 2005), actively strengthening the architect's identity and enabling an "immaterial site", as (Hill, 2003) rhetorically called it, which endows the architect with hegemonic power on the building site over craftsman.

The central distinction between architects and painters in the Western tradition has hinged on the conscious application in drawing of the different types of expression and geometry used in orthogonal projections and perspective. Painters and architects inclined to use different forms of drawing: The Painter uses liner perspective to emphasis the shape, volume, and depth objects with shading and diminishing lines and angles, while the architect represents the shape, dimension, and depth of buildings by the combination of plan and each face in orthogonal projection without altering the lines and maintaining the true angles (Alberti, 1435; Pérez-Gómez and Pelletier, 2000, p. 27).

The emergence of the section with orthogonal projection and its distinction from the perspective section separated the two professions of architect and painter to a great extent (Lotz, 1977).

However, considering those theories on architectural drawing are sourced in the Western context, the second significant analytical method is needed, which is situating the analyses of architectural drawing in China's entangled historical, political, and cultural context. It is because the relationship between symbolic meanings and visual forms may change subject to different periods and contexts. The typical case is the using of the perspective. Perspective, as an intellectual tool, bundled the architect and the artist together while repelling the craftsman at the beginning of its discovery. However, in the nineteenth and twentieth centuries when architects started to reflect the constraints of perspective, they exaggerate "the mendaciousness of perspectival projection" and overestimate "the truthfulness of orthogonal projection" (Evans, 1986; Pérez-Gómez and Pelletier, 2000; Forty, 2000). Orthogonal projection, rather than perspective, became the visual form that symbolized the identity of the architect. The changing positions of perspective and orthogonal drawing prove that the relationship between different visual forms of drawing and the projective identity in drawing is subject to change in history.

Thirdly, this research applies an approach that links this broadly theme — the relationship between architectural drawing and the architect's identity — to the detailed discussion of how the representative figure — Li Jipiao — among his contemporaries employed the power of drawing to establish the identity of the architect. This approach can invite in-depth analysis of the unique characteristics of Liu's drawings and trace some of the most important moments that determined Liu would be the representative who would fulfil this task.

Correspondingly, this article aims to respond to the research questions and fill these gaps in three steps of historical analysis. First, it investigates the historical challenges drawing faced in establishing the identity of the architect in the 1920s by contrasting the Western and Chinese development of architectural drawing. Second, the article locates the representative figure of the architects, Liu Jipiao who employs the architectural drawing that carries the historical challenges. Third, it reveals how Liu's drawings fulfil the historical requirement and start to accommodate the new subjectivity of architect, an earned identity rather than a given title.

3. Architectural drawing and the new Chinese architects

The early modern historical context of drawing in establishing the identity of newly-established native architects in China is dramatically different from that in the Western world. First, when Western architects first emerged in the Renaissance, drawing played a key role in distinguishing them from craftsmen and allowing them to gain intellectual authority; however, drawing played no such role in the emergence of the modern Chinese architect. In the West, drawing, and the roles of drawing in establishing the identity of the architect, evolved gradually over time. In

China, the first Chinese architects got their professional training overseas, and their Western education equipped them with the tool of drawing using Western geometry. However, the techniques of Western drawing had actually arrived in China even earlier than the emergence of the professional architect, and it was the traditional builders who first had access to these techniques. The Qing dynasty (1644–1912) scholar Nian Xiyao edited the book Shixue, which introduced Euclidean geometry (Zhu, 2013). The Yang Shi Lei family, the ancient constructors in the Qing dynasty, had been able to use Western drawing techniques to draw sections of building groups (Ota and Inoue, 2005, pp. 20-21). Chinese craftsmen, to some extent, could perform the orthogonal technique directed by foreign architects or artists, such as the drawers performing orthogonal illustrations under the instruction of the artistic historian Osvald Siren in his book in 1924 (Sirén, 1985).¹ Under this circumstance, drawing could not distinguish architects from craftsmen, as they were all equipped with the technique of drawing.

Second, the main counterpart confronting the first generation of Chinese architects who were attempting to establish their status was the engineer. Modern Chinese engineers were also equipped with drawing techniques; moreover, historically they had priority in the architectural market and had associated themselves with building construction. Before the first generation of architectural students graduated from overseas around 1920 to 1925, a larger cohort of modern engineers had received overseas training and established the Chinese Society of Engineers, which preceded its architectural equivalent by fifteen years. This phenomenon was due to industry preferences influenced by the propaganda slogan "Chinese learning for essence, Western knowledge for practical application" (Zhong Xue Wei Ti, Xi Xue Wei Yong) of the Westernization Movement (Yang Wu Yun Dong) (Denison, 2017, pp. 39-40; 138-142). The engineers emerged first and controlled the building construction market alongside foreign architects. Liu Jipiao in that period has incisively realised this situation. He wrote in his article that "for decades, there have been many overseas-trained engineers now and architects have started to appear. Architects should now unite to create a new architecture (Liu, 1929b)."2

The third and the most dramatic difference between the Chinese context and the Western one is that Chinese architects had no referential affiliation with painters compared to Western architects. In the European Renaissance context, the intellectuals who created drawings often bore the status of both architects and artists who used the same scientific tool of linear perspective to create the illusion of depth on the picture plane. For example, Leone Battista Alberti (1404-1472), Leonardo da Vinci (1452—1519), Michelangelo Buonarroti (1475—1564), the Classicist Raphael (1483—1520), etc. are those earliest

¹ A Chinese craftsman named Shu Shuhuan has drawn a piece of watercolour drawing of building in the Forbidden City for Siren's book (Sirén, 1985).

² The original Chinese text is that "数十年来,海外陆续归国的工程师颇为不少,即建筑师亦渐有之。建筑界的同志们,时候到了,我们应试把自己的勇气和互助的精神合作起来,百折不挠地去创作新的建筑。这也是我们新文化运动中之一大部分工作。"

master architects using exquisite drawings who were also painters or sculptors (Powell and Leatherbarrow, 1982). On the other hand, despite the separation of the two professions of architect and artist in Western history after the Renaissance period, architectural drawing and painting were still entangled in dynamic relationships of intimacy with or alienation from each other. There were always architects who had artistic talent and drew architectural drawings like fantastic paintings. For instance, in the Picturesque movement that appeared in Britain in the eighteenth and nineteenth centuries, the painterly way of drawing became prevalent, and architects such as Sir William Chambers (1723-1796), Robert Adam (1728-1792), Anthony Salvin (1799-1881), etc. (Stamp, 1982; Lever, 1984) gained reputations as perspectivists and watercolourists. In Western historical circumstances, drawing served to bond the architect with the artist while excluding the craftsman. This situation gave rise to a particular way of differentiating the architect from the painter. These are also the reasons why drawing, as intellectual work that distinguished the architect from the craftsman, failed to differentiation between the architect and the artist (or painter) in the Western context. This lack of distinction prompted Western architects and artists to begin using different forms of drawing.

In the traditional Chinese context, builders had performed very complicated drawings, and these drawings shared some visual traditions with painting. However, Chinese ancient drawings related to construction had established no affiliation between builders and painters like the one that had existed between architects and painters in the Western context. The Chinese traditional "architectural" drawing was drawn in a collective manner that expressed the Chinese philosophy of cosmology, neither releasing builders from construction nor gaining them a similar intellectual authority to painters, who projected their individual subjectivity into their painting. Traditional Chinese builders were never considered relatives of painters.

The three above-mentioned differences between early Chinese architects and early Western architects created for the early Chinese architect particular historical requirements and possible solutions to these requirements. The first two differences (that drawing carried no prior intellectual authority in China and that the Chinese engineer was the Chinese architect's first and foremost counterpart) created a requirement that architectural drawing should provide a different intellectual viewpoint than the engineer's or the craftsman's drawing. The latter difference (the lack of affiliation between builders and painters in Chinese culture) provided the Chinese architect with an opportunity and a possible solution to this requirement: building the affiliation between the architect and the artist.

4. Liu Jipiao and French avant-garde style

The first significant collaboration between Chinese architect and artist centred on Liu Jipiao and his drawings. That Liu Jipiao entered into history and became a representative figure of his era was not accidental, and cannot be credited only to his experience and intelligence. More importantly, this thesis argues in this section that it was the entangled

Chinese history in the unique "quasi-colonial (Denison, 2017, pp 36–38)"³ environment, together with the requirement of differentiating the Chinese architect from the engineer, as I revealed in the last section, that promoted Liu as the most suitable representative figure in his cohort. The French avant-garde style materialised in this period of China's entangled history. Two crucial questions arise from this situation: why was Liu Jipiao the representative figure in his cohort of architects, and why did the French avant-garde style succeed in China over many other multi-cultural influences?

4.1. Liu as the representative figure of his cohort

Liu Jipiao was the first of a series of figures who held the dual identities of artist and architect; these identities sprang from his professional training in the Western context where artists and architects had a close affinity. Liu completed his overseas education in France from 1918 to 1926, and there he performed both as an artist and an architect. He studied painting in the beginning when he was accepted by the L'Ecole Nationale des Beaux Arts in the Section de Peinture (Wong, 2013). Then Liu changed his interest to architecture (Sun, 1928). He participated as the main contributor in the two influential exhibitions among Chinese artists in France, the Exposition Chinoise d'Art Ancien et Moderne (the Strasbourg Exposition) in 1924 and Exposition Internationale des Arts Decoratifs et Industriels Modernes (the Paris Exposition) in 1925. In these two exhibitions, he presented both paintings and his architectural design ability in the interior design of the China Pavilion.

The other reason that Liu was able to be the representative of the modern Chinese architect was because, before Liu initiated his theory and practice of the collaboration between art and architecture, the two academic areas had had little intersection in the first half of the 1920s in China. Although most of the Chinese artists and architects had received their education in Japan as part of the first overseas education trend in China (Denison, 2017, pp. 31–32), the two groups had received two different types of education - artistic and technical. The first wave of artistic students, including Li Shutong (1880–1942), Zeng Yannian, Ni Yide, and Liu Haisu, got their training from the Tokyo School of Fine Arts (Sullivan, 1996). In contrast, the first architects who got their training in Japan, Liu Shiying (e. 1915-1920) and Liu Dunzhen (e. 1916-1921), got their education at the Tokyo Higher Technical School (Denison, 2017, p. 139). The architects barely had any connections with the artists. Although, in a later period, Japanese architectural academia led the debate between "architecture as fine art" and "architecture as industry," the first generation of Chinese architects who studied in Japan did not assimilate these ideas and remained engineering architects. Liu Shiying and Liu Dunzhen established the firstever course in architecture that emphasized the technical character being taught at the Suzhou Technical School (Suzhou Gongye Zhuanmen Xuexiao) in Jiang Su province.

³ This concept was discussed by Edward Denison to distinguish China's unique encounter with the Western colonial power.

In the later 1920s, when Chinese architects consciously started to distinguish themselves from engineers, architects other than Liu could not function as intermediaries between the two disciplines of art and architecture and were trapped in the gap between the engineering architect and the artistic architect. The first generation of architects, who had received their training overseas before 1925, situated themselves in the existing context dominated by Chinese engineers and foreign architects; they worked as engineering architects in foreign architectural firms such as Murphy & Dana (Cody, 2001) or established their own businesses competing with engineers who also practiced in the architectural market (Lai, 2006; Denison, 2017). Nevertheless, they gave rise to the historical requirement to create the identity of an artistic architect.

4.2. The French trend

The influence of the French avant-garde in Liu's establishment of the artistic architect was not only due to Liu's education background. Instead, it was rooted in entangled historical and political propagandas, which included France as the preferred destination for Chinese education overseas, art's attainment of a higher social position, and the fact that the modern concept of art contained the subject of architecture. France, as the preferred destination for China's overseas education agenda, was enmeshed in its political strategy of cultural expansion in China's quasicolonialization environment. In the 1920s, warlords increased the complexity of the political environment in China and also prevented several dominant ambitious colonial powers from further colonization in China (Fairbank and Twitchett, 1983, pp. 284-321). Among these powers, France claimed that French culture interfered with and influenced Chinese culture more slightly compared with other Western cultures' hegemonic and overloading influence and that France's spirit and aspirations were harmonious with China's native culture (Bailey, 1992, pp. 822-830). This propaganda fit with Chinese intellectuals' embrace of cultural identity and nationalism in their resistance to the disunity and international vulnerability in the turmoil caused by Chinese warlords (Fairbank and Twitchett, 1983, p. 319).

The Chinese Francophile project of the early twentieth century followed, and France became the overseas educational destination of choice in the "diligent work and frugal study" project promoted by Li Shizeng⁴ and Cai Yuanpei⁵ beginning in 1916 (Bailey, 2014). Under this programme, many students were sent to study in France. France, as the vanguard artistic centre in Europe, also became the most popular destination for art education, where Chinese artists could find "the most direct and respected source of modernist styles (Andrews and Shen, 1998, p. 176)" in the 1910s and 1920s. Liu Jipiao, Lin Fengmian, Lin Wenzheng, and Sun Fuxi, the most important

artistic figures who were later involved in the efforts to establish Liu as the artistic architect, were all nurtured in the French avant-garde (Sullivan, 1996; Clunas, 1989).

Meanwhile, art attained a unique and higher position in modern Chinese society due to the educational and cultural agenda promoted by Cai Yuanpei. Cai, as the first republican Minister of Education of China and the programmatic figure in this agenda, proposed the ideology of "Replacing Religion with Aesthetic Education" (Mei Yu Dai Zong Jiao) in 1917 after the New Culture Movement. He believed that art should become the most vital force in the creation of an ideal modern society and that it could serve as a substitute for the religion of ancient society.

After those artists in France got back to China, they played significant role in promoting modern art — to them the French avant-garde art in China. Adopting the Western tradition, in which architecture had a long history as an artistic discipline, they promoted the idea that architecture should fall in the domain of modern art in China as well expanding the traditional Chinese recognition that visual art mainly involved painting and calligraphy. In this cohort of French-trained Chinese artists, Liu Kaigu first promoted architecture as art (Liu, 1928l). Liu Jipiao, with his dual professions in art and architecture, was promoted as the representative figure for presenting architecture as art in the art domain as well. Correspondingly, French avantgarde style firstly had the chance to get access to Chinese art and architectural landscapes in this context, exemplified in the works of Liu Jipiao.

5. Drawing in the establishment of the artistic architect

Liu Jipiao's architectural drawings, which mostly delivered his modern architectural design, bloomed in the period of 1928—1929. They had a revolutionary power and shaped the artistic architectural landscape (although mainly on paper). Liu's drawings were at the vanguard of Chinese architectural drawing, and no one had seen anything like his drawings in the young Chinese architectural arena. This section reveals how his drawing responded to the historical requirement to express avant-garde artistic characteristics, and how his identity as an artistic architect was thus constructed.

5.1. Constructing an artistic architect

Although Liu was not a traditionally trained architect and the documentation of his formal relationship to architectural education has been lost, the justification for regarding him as a qualified architect and recognizing the Beau-Arts tradition in his architectural forms exists in his rare dedicated and published drawings of plans of buildings. These drawings show clear influences of and references to the Beaux-Arts tradition, in both drawing style and architectural composition (Figs. 1–4). Among them, the national government building is a typical case (Fig. 1). The drawing is drawn in orthogonal projection and is rendered in an elegant and harmonious mood. The biaxial and symmetrical planning organises the space and volume along two axes intersecting at right angles in a significant central space.

⁴ Li Shizeng (1881–1973) educated in Franch was an Chinese social educator and one of the cofounders of l'Université Franco-Chinoise (Franco-Chinese University) in 1920.

⁵ Cai Yuanpei (1868—1940) was the Republic of China's first Minister of Education in 1912.

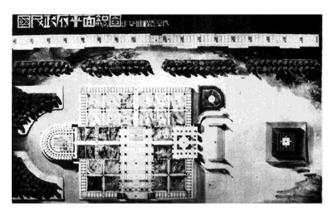


Fig. 1 National government building design - general plan (Liu, 1929d).

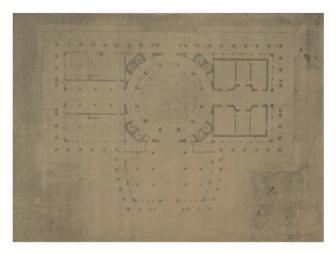


Fig. 2 Plan of National Library (Liu, 1928g, p. 63).

The components of the plan are composed using a combination of the fundamental geometric forms, including the rectangle, semi-circle, and triangle. Those principles obey the typical and classic "composition" of a building in the Beaux-Arts tradition.⁶

Even though the elevation and components of some of the buildings, such as the national government building (Fig. 5) and the Conference Hall (Fig. 6) seem a bit exotic, each combination as a whole is still similar to a typical Beaux-Arts drawing. The same is true of some of his other expressive drawings, such as the Façade of the Martyrs Shrine (Fig. 7). This drawing is rendered in surprisingly expressive and strong colours. However, the composition of the building is still constrained to the symmetrical combination of geometric forms following the Beaux-Arts tradition. Although the drawing of the façade subverts the overall Beaux-Arts impression of Liu's drawings and is rendered in his other dominant drawing languages, the symmetrical composition of the building reveals its adherence to orthodox Beaux-Arts tradition when it is compared with a classical Beaux-Arts drawing of an elevation.

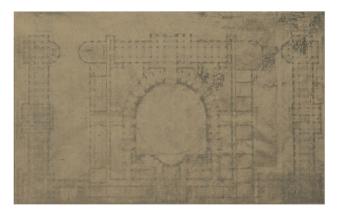


Fig. 3 Plan of the Parliament (Liu, 1928h, p. 66).

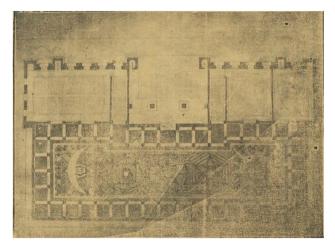


Fig. 4 Plan of the Martyrs Shrine (Liu, 1928f, p. 62).

However, Liu's powerfully expressive perspective drawings distinguish his drawing from other Beaux-Arts traditional work and reflect Liu's identity as an artistic architect rather than an orthodox Beaux-Arts architect. Those drawings are composed in two-point perspective and use sharp, vivid, and saturated colour value. In contrast with architectural drawings by other Beaux-Artstrained architects mentioned in this thesis, such as Liang Sicheng and Tong Jun, the number of plans in Liu's architectural drawing collections was limited, and drawing plans played only a constrained role in the expression of his ideas. On the contrary, Liu's most functional, inspiring, and eye-catching drawings are those using an expressive perspective.

Liu drew artistically, and the expressions he chose incorporated both the Western and Chinese cultural backgrounds that nurtured him and the Chinese architectural context in which he participated and to which he accommodated his ideas.

5.1.1. The perspective: picturesque

Liu's preference for using perspective rather than orthogonal projection drawings is the first obvious clue that he drew in an artistic way rather than like a canonical architect. In the Western history of architectural drawing that

⁶ The characteristics of the composition of buildings and some typical practices in the Beaux-Arts tradition can reference to (van Zanten, 1977).

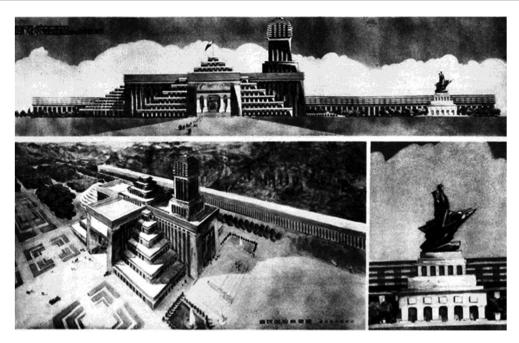


Fig. 5 National Government Architectural Design — Entrance Perspective (upper) (Liu, 1929c); — Top View (lower left) (Liu, 1929e); Cenotaph in Memorial of Prime Minister's Death in Guangzhou (lower right) (Liu, 1929a).

had natured Liu, the preferential usage of orthogonal drawings over perspectival drawings had been an indication of the separation between professional architects and other artists since the discovery of linear perspective, when architects established themselves as different from craftsmen. Both historical debates between architects and research regarding the architect's status or relationship with drawings reveal the tendency for the Western architect to use orthogonal projection rather than perspective. Although, until the eighteenth century, artists often bore alternate identities as architects and the two methods of orthogonal and perspective representations were used side by side, architects tended to demonstrate the proportional ability of perspective rather than its picturesque aspect.⁷

Liu, as an architect with a Beaux-Arts education background, would have known that orthogonal projection had been well accepted as the best way to illustrate buildings in the 20th century. Liu Jipiao followed this tradition, as evidenced by his engagement with skilled plans. However, he drew few plans, and it was rare for his drawings to be rendered in the elevation rather than in perspective. Even

⁷ Starting from Leone Battista Alberti (1404–1472)'s famous statement of the difference between drawings by architects and those by painters, that architect's truth lie in the proportion and principal measurements in the ground plan rather than in a perspective rendering. Filippo Brunelleschi (1377–1446), Leonardo da Vinci (1452-1519), and Donato Bramante (1444-1514) dedicated in developing the proportional perspective, while Classicist Raphael (1483-1520) and Andrea Palladio (1508-80) established the close primacy of orthogonal projections. Wolfgang Lotz's in his study further proposited that the emergence of the section with orthogonal projection and its distinction from the perspective section separated the two professions. These historical facts and arguments could also find in: (Alberti 1435; Wittkower 1953; Wittkower 1953).



Façade of the Martyrs Shrine (Liu, 1928d).

Elevation of the conference Hall (Liu, 1928b). Fig. 6

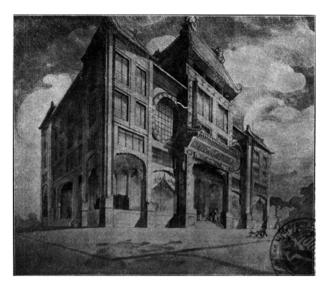


Fig. 8 Company (Liu, 1928a).

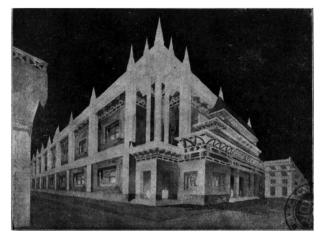


Fig. 9 Theater (Liu, 1928j).



Fig. 10 Drunk Moon Pavilion (Liu, 1928c).

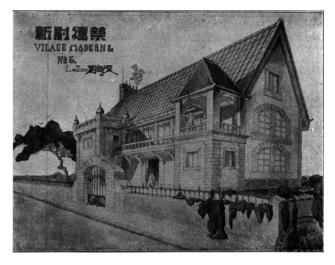


Fig. 11 Villa (Liu, 1928k).

the drawing of the Martyrs Shrine, which was called an "elevation", was still rendered in perspective (Fig. 7).

Moreover, even in terms of Liu's use of perspective, his drawings were not rendered in the one-point perspective that had been preferred by traditional Western architects and artists since its discovery in the Renaissance but in the very picturesque method of two-point perspective (Figs. 8—11). Two-point perspective was frequently used in architectural drawing and landscape painting in the English Picturesque movement (Lever, 1984), and it influenced Europe during the seventeenth and eighteenth centuries (Powell and Leatherbarrow, 1982).

Although it is hard to associate Liu's drawing directly with traditional picturesque drawing or painting due to the interference of other strong expressive characteristics. especially saturated colour, many clues, together with his preference for two-point perspective, reveal the possible imprint of the picturesque movement on his drawings. The first clue is his training as a painter in Paris and his earlier paintings created when he studied in Paris, which indicate his familiarity with the picturesque movement and his possible response to it. Before he switched his interest to architecture, Liu was first accepted in the Section de Peinture in L'Ecole Nationale des Beaux Arts. One of his painting, The Tang Beauty Yang Guifei after Bath (Fig. 12), exhibited in the Strasburg Exposition in 1924, shows the academic Salon style and the imprint of the earlier movement of Picturesque Romanism. In this painting, Liu created a modern interpretation of the Chinese historical figure using the Paris Salon style and illuminated the figure with strong light. Sullivan (1996, p. 40) in his book pointed out that Liu's painting is reminiscent of the salon style of William-Adolphe Bouguereau (1825-1905) and Thomas Couture (1815-1879).

Second, the most relevant evidence of Liu's references to the picturesque movement in his drawing is critical interpretation that his artistic architecture showed the qualities of the "sublime" and "beauty," the two significant qualities of the picturesque. Those qualities were first



Fig. 12 The Tang Beauty Yang Guifei After Bath (Li, 1924, p. 42).

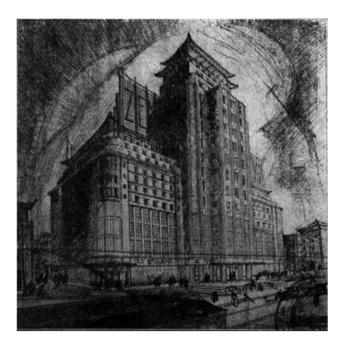


Fig. 13 Market (Liu, 1928e).

raised in Liu Kaiqu's article, which was the first article to promote a theory of "artistic architecture" in China, Liu Jipiao as an artistic architect, and his drawings as the representatives of artistic architecture (Liu, 1928l; Liu, 1928m). The qualities of the "sublime" and "beauty" were the most important aspects of the picturesque movement's philosophy of architecture (Hussey, 2019). In addition to Liu's exposure to the picturesque influence in France, he also had access to this philosophy in China. The picturesque had an early reception in the Chinese architectural domain under the auspices of two British scholars,

Sir William Chambers and James Furgurson, who expressed Burke (1812)'s philosophical ideas about the sublime and beauty in architecture. Chambers was the first professional architect to research Chinese architecture, while Fergusson's ideas were translated in an article by a Chinese scholar Wu (1924). Perspective drawing played a vital role in expressing this philosophy of the "sublime" and "beauty". Stamp (1982, p. 12) wrote in his book, *The Great Perspectivists*, "For the adoption of true perspective drawing by architects, a new Romantic taste for the sublime, for the primitive and the pure was responsible — that feeling for the expressive form and mass in architectural design which was Neoclassicism."

Liu adopted the picturesque way of using two-point perspective to express the architectural characteristic of the sublime. His drawings use a dramatic two-point perspective. The vanishing points are so close to the buildings that their images are exaggeratedly high and massive in appearance (Fig. 13).

5.1.2. The French avant-garde: colour and antiperspective

Apart from Liu's use of the picturesque two-point perspective, his drawings have a typical French avant-garde quality, especially and significantly in the way they are filled with saturated colour, anti-perspective, and motion. The most outstanding characteristic in his drawings is vibrant and expressive colour. Liu's drawings of the Martyrs Shrine (Fig. 7) and the Marble Ball Room of Paris (Fig. 14), published in 1928, are two typical coloured drawings. ¹⁰ Liu used the same colour schemes frequently: bright pink, pinkish white, yellow, orange, grey-green, and blue-grey are the colours shared by these two drawings. Among them, the colour value in between pink and violet is the most widely used colour and sets the leading tone for these

⁸ The original Chinese text is"刘既漂先生专制美术建筑,在欧洲潜学十年,遍游欧洲各地,研究古代建筑,综览现代作风,对于建筑学理与历史都有澈底的研究。其作风鲜明,秀丽有如南欧的天气,中国江南的晴空,其磊磊落落,伟大的表现又有北方的崇高精神。这种作风是沟通中西建筑的精英而成的,实足代表中国这一代的文化精神,时代思潮的。"

⁹ This event is mentioned in (Wang, 2009).

Although we have strong belief that almost all of his drawings and paintings were depicted in colour mode, most of the published ones were in black and white mode. The original drawings were lost after Liu fled to the US. Only two colourful drawings of his architectural design works published in Chinese journals in 1927 and 1928 after his return from Paris to China can be found nowadays.

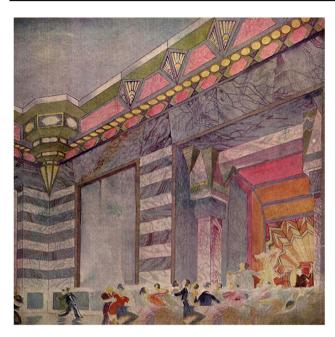


Fig. 14 The Marble Ball Room of Paris (Liu, 1929f).

two drawings. Other substantial saturated colour values (green as the contrasting colour to pink, orange or yellow as the adjacent colour to pink) are situated together to express the intense emotion of Liu's style.

The way Liu used colour strongly references the avant-garde movements in Europe, and especially the movement of Fauvism prevalent in Paris during 1904—1908 and German Expressionism, which emerged in Germany in 1905. The revolutionary usage of colour became an essential theme in the paintings of Europe in the late nineteenth and early twentieth centuries, such as in Henri Matisse's *Interior at Nice* (1921) which employs the similar vivid pink, orange and yellow as the dominant tone in Fig. 14. Fauvism and German expressionism inherited Vincent van Gogh's Post-Impressionist experiments and continued to use experimental associations of colour with artists' inner subjective expression (Gombrich, 1950).

Likewise, the colour in Liu's drawings reveals his subjective projection of the qualities of architecture, the aforementioned "sublime" and "beauty". Liu's ideas about colour were not only expressed in his drawings; he also directly pointed out the correspondence relationship between colours and architectural qualities in his theory of colour usage. In his article "Colour and Sentiment" (Liu, 1928i), he associated bright pink with feelings of the "sublime" and "beauty". He also mentioned in this article, "Purple was frequently used in fine art. In the Opéra National de Paris, ultraviolet pink light was used to illuminate the elevation of the opera at night, and the grey-white was shadowed in purple light, which enhanced the beauty of the building." 11

Alongside Liu's use of colour in his drawings, the other extremely vanguard factor in his work, anti-perspective, is reminiscent of the works of Henry Matisse (1869–1954), the representative figure of Fauvism. This contributes to the association of Liu's drawings with French avant-garde artistic movements, in which twentieth-century artists dedicated themselves to the challenge of dismantling canonical perspective in their paintings to express a modern sensibility. The Marble Ball Room of Paris (Fig. 14) shows an interior scene that is drawn with a twist on two-point perspective, projecting the author's intention of dismantling the perspectival space. The top decorations of the room, drawn in pink, yellow, and green, construct a spatial illusion between stepped three dimensions and flattened two dimensions. The repeated patterns of circles and polygons on the right side are painted as if they are on the same flattened vertical plane as the non-transformed shapes. However, as the patterns move toward the left, the circles transform into ovals while the polygons remain the same, creating an illusion that the circles are on a horizontal plane while the polygons are still on the original vertical plane.

Moreover, the expression of the intersection between the triangular prism and its background is very fuzzy, and it is hard to tell whether they are three-dimensional objects or two-dimensional ones. Furthermore, the whole picture has no shades of light or shadow to facilitate the precise interpretation of dimensions. This is reminiscent of the profound effort made by Henry Matisse in his work, The Red Studio. Although these two works are interpreted in different colour values and use different means to dismantle perspective, they share the achievement of a new method of expression that belongs to the avant-garde artist.

The possibility that Liu was influenced by and referenced Fauvism and German Expressionism is also revealed in another, indirect clue. This clue involves a third party, Lin Fengmian, one of the most avant-garde artistic figures in China. Liu Jipiao had a direct and close relationship with Lin Fengmian; Liu worked very closely with Lin and was influenced by him. The two participated in the Strasburg and Paris exhibitions together. Later, Liu worked in the department of design at the Chinese art academy he and Lin had created together with other figures and where Lin was the dean. The way Liu painted the female dancing in his painting Huang Gong Wu Zhe (Fig. 15) was significantly influenced by Lin Fengmian's figures in his paintings (Weng, 2014). Lin Fengmian's paintings have been shown to be involved in the two above-mentioned avant-garde movements, Fauvism and German Expressionism (Andrews and Shen, 2012, p. 61). Hearn and Smith (2001, p. 34) stated that Lin Fengmian's paintings reference the work of Henry Matisse, the representative figure of Fauvism. Sullivan (1996, p. 39) argued that Lin Fengmian's "Grouping in the Dark" for the Strasbourg Exhibition, completed in Berlin, is under the spell of German Expressionism. Danzker et al. (2004, p. 21) claimed that its vivid colours and black contour lines are reminiscent of both Erich Heckel and Ernst Ludwig Kirchner, two German expressionist artists and the founders of Die Brücke (The Bridge). Moreover, Sun (1928) has mentioned that Liu Jipiao's trip to Berlin and the art and architectural movements in Germany shocked him and

¹¹ The original Chinese text: "紫色之用于纯粹艺术极多,尤以历史画及风景画为甚,装饰方面现代亦甚发达,如银紫色的电光,为欧美物质生活中所痴爱者。现在巴黎国立大戏院正面的电光,由灰白的塑刻上露其紫光,建筑的价值亦假此特显其美。"



Fig. 15 Dancers from the Imperial Palace (Liu, 1924).

influenced him to transfer his interest from painting to architecture. Lin Fengmian accompanied Liu on that trip, and this is also where Lin became attached to German Expressionism. Liu's reference to those avant-garde movements may indirectly come from the influence of Lin Fengmian's works as well. Although the direct evidence of Liu's association with these two avant-garde movements is limited, his drawings and the indirect clues still reveal a strong tendency to reference these avant-garde movements.

5.2. Becoming an artistic architect: translation vs expression

Liu treated his architectural drawings as final products rather than as an intermediate medium for translating ideas into construction; this is a testimony to the fact that Liu's identity was much more like that of a painter than of an architect. Evans, in his article, revealed a fundamental difference between architects' and painters' drawings. For an architect, drawing precedes the building, and it is a tool that transmits the architect's ideas, using its transitive, commutative properties, while, for a painter, drawing follows the building and it is the final product narrating events or feelings (Evans, 1986). Liu's expressive drawings belong to the latter category. Liu's drawings were intended to be published in journals, with no aim of construction. Instead, they served to narrate the story of an artistic architect and expressing their author's feelings.

Conventionally, an architect's drawing represents a design or idea, while Liu used two-point perspective to express his subjective feelings and convey those feelings to his audience, like an avant-garde painter from the early twentieth century's artistic movements of Fauvism and German Expressionism as I proved in the last section. These movements emphasized subjective experiences by manipulating drawings to evoke emotional effects rather than physical reality, while in the architectural domain in the late nineteenth and the early twentieth centuries, Western architects were eager to express ideas (design) objectively and the prevalent sentiment was that drawings should be the objective representation of architects' ideas (design). Since Durand, architects had preferred to use orthogonal or axonometric drawings to stress the objective quality of their work (Pérez-Gómez and Pelletier, 2000).

At that time, painters and architects were walking in different directions in their use of drawing. Painters projected inner subjective feelings and exaggerated the emotion in their work, while architects avoided a personal perspective and embraced the objective as much as possible. Architects in this way were able to translate their ideas into reality as accurately as possible. The more objective their drawing, the closer it could come to representing the unattainable ideal of the architect's inner subjectivity.

In 1930, in the Western context, modernist architects, such as Le Corbusier, who also bore the dual identities of painter and architect, exemplified with their hatred of artistic rendering a fundamentally different ideology (Forty, 2000, pp. 31—32) than that of Liu Jipiao. Due to their different contexts and the historical requirements they faced, although both Liu and Le Corbusier were avantgarde figures active in the same period, the Chinese architect used artistic drawing and built an affinity with the artist. In contrast, the Western modernist architect walked away from the painter.

6. Discussion

This article has argued both the macroscope Chinese context drawing faced and the decisive moments drawing experienced around the key figure Liu Jipiao and his way of employing drawing. Drawing in erecting the identity of the Chinese architect at the beginning of the twentieth century faces three main differences with the Western counterpart. First, drawing carries no prior intellectual authority and its authorship is the craftsman in the Chinese tradition unlike the intellectual painter and architect in the Western tradition. Second, the western-trained modern engineer who also uses drawing is the primary counterpart that the Chinese architect faced in ensuring the identity, rather than the painter or other artist. Third, there is no prior affiliation between builders and artists in Chinese tradition. Those three differences facilitate the Chinese architect who was equipped with modern drawing to build an acquired similar affiliation between the architect and the artist.

Liu Jipiao's progressive artistic architectural drawing fulfilled this historical requirement and constructed this acquired similar affiliation in China. Compared with the scientific power early engineers and craftsmen gained with the common use of orthogonal drawings, the intentional application of perspective and the French avant-garde style of drawing in Liu's drawings enriched Chinese architectural drawing with a further intellectual power — artistic power. Liu thus became the representative artistic architect. Some other architects, such as Lu Yanzhi, Fan Wenzhao, and Zhao Shen, participated the First National Exhibition of Art held in Shanghai in 1929, which was informed by the two earlier exhibitions held in France - the Strasbourg Exposition in 1924 and the Paris Exposition in 1925 - and showed inclinations toward the artistic architect as well (Ercums, 2014, pp. 173-174). Correspondingly, these early architects were able to endow themselves with the features of the artist architect and build an identity of the "architect" as different from the engineer.

Meanwhile, this article has revealed that the entangled historical, political, and educational background has enabled Liu Jipiao to emerge as a representative figure of the cohort of Chinese architects in the late 1920s. He is among the first educated in the innate Western affiliation between architect and artist carrying those two identities together compared with other architects. This finding is controversial to the previous evaluation of Liu as an unrepresentative intellectual and thus offers a chance to challenge the preconceived hegemonic historical perspective of exploring the non-mainstream.

7. Conclusion

In the process of investigating the establishment of the Chinese architect, the other issue this article wants to interrogate is the dominant perspective of writing history and evaluating figures. Liu Jipiao, as a representative figure involved in both the art domain and the architecture domain internationally and domestically, is seldom mentioned in Chinese architectural historiography and has not been accepted as a figure worthy of much intellectual scrutiny. Western researchers studying modern Chinese art history before 1949 (Kao, 1972; Clunas, 1989; Sullivan, 1996; Ercums, 2014; Denison, 2017) have mentioned him as a contributor in the 1925 Paris Exposition, which, together with the 1924 Strasburg Exposition, marked the beginning of the evolution of modern Chinese art and of China's contribution to Art Deco (Thorpe, 2016).

Compared with the research in English, research in Chinese has contained comprehensive events around Liu (Xu, 2010; Fei, 2007; Fei, 2011; Wong, 2013; Weng, 2014; Lu, 2018). However, most research on individual figures has neglected the nuanced history around them; such research on Liu has consisted of personal history and the retracing of his architectural route. Most of these studies concluded that Liu's effort to promote "architecture as fine art" was due to his personal taste and the influential educational background in France. Some research (Zheng, 2013; Gao and Peng, 2017) using this conclusion as a reference point treated Liu's practice as an individual failing trial because of its minority and lack of successors.

The article argues this misreading is due to the influence of the hegemony and singularity perspective of modernity,

which neglects the association between minority and the entangled historical context. Using the perspective of multiple modernities to challenge the previous heroic one, this article claims the inevitability of Liu's position as the representative architect of his period and the necessity of Liu's choice within the historical context because of both his proactive creative choices and his passive encounters with history. By doing so, the complexity of Chinese architectural modernity and the entanglement between intellectuals and history are more comprehensive.

Meanwhile, the rise of the professional identity of the architect in China is vital to many key issues in researching Chinese architectural modernity. One of them this research is closely related to is the modernity of Chinese architectural drawing. Chinese architectural drawing underwent a profound change around the beginning of the twentieth century, from the traditional drawing that possessed a unique set of terminologies and geometric principles that were entirely distinguished from the Western Euclidean geometry to a new form of drawing that incorporated and adopted Western Euclidean geometry and its associated terminologies. Modern architectural drawing in China has been presupposed as merely a technical tool and as little more than the product of Western training and geometry, which has not got enough systematic research, especially rare on the subjectivity of drawing. This article has revealed the close relationship between the employment of drawing and the establishment of the architect. One contribution of this article is its focus on the subjectivity of drawing to understand the profound change marked by the projected new identity of Chinese architects. As both the art historian Clunas (1997) and the architectural historian Scolari (2012) have admitted, the reason Western geometry was not widely accommodated in China before the twentieth century was not that the Chinese did not accept the techniques per se but lay somewhere else.

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References

Alberti, L.B., 1435. Ten Books on Architecture. Transatlantic Arts. Andrews, J.F., Shen, K., 2012. The Art of Modern China. Univ of California Press.

Andrews, J.F., Shen, K., 1998. A Century in Crisis: Modernity and Tradition in the Art of Twentieth-Century China. Solomon R. Guggenheim Foundation.

Bailey, P.J, 1992. Voltaire and Confucius: French attitudes towards China in the early twentieth century. Hist. Eur. Ideas 14, 817—837.

- Bailey, P.J., 2014. Cultural connections in a new global space: Li Shizeng and the Chinese francophile project in the early twentieth century. In: Lin, Pei-yin, Tsai, Weipin (Eds.), Print, Profit, and Perception: Ideas, Information and Knowledge in Chinese Societies, 1895-1949. Brill.
- Burke, E., 1812. A Philosophy Enquiry into the Origin of Our Ideas of the Sublime and Beautiful. FC and J. Rivington, Otridge and son.
- Clunas, C., 1989. Chinese Art and Chinese Artists in France (1924-1925). Arts Asiatiques, pp. 100–106.
- Clunas, C., 1997. Pictures and Visuality in Early Modern China. Reaktion Books.
- Cody, J.W., 2001. Building in China: Henry K. Murphy's "Adaptive Architecture". Chinese University Press, pp. 1914–1935.
- Danzker, J.B., Lum, K., Zheng, S., 2004. Shanghai Modern, 1919-1945. Cantz.
- Denison, E., 2017. Architecture and the Landscape of Modernity in China before 1949. Routledge, New York.
- Ercums, I.K., 2014. Exhibiting Modernity: National Art Exhibitions in China during the Early Republican Period, 1911-1937. The University of Chicago.
- Evans, R., 1986. Translations from drawing to building. AA Files 3–18
- Fairbank, J.K., Twitchett, D.C., 1983. The Cambridge History of China: Republican China, 1912-1949 part 1, 12. Cambridge University Press.
- Fei, W., 2007. Research on the Design of 1929 Westlake Exposition. Master, Nanjing Art Academy.
- Fei, W., 2011. Grafting "Decorative Art", Blooming the Flower of "Fine Art Architecture": Discussion on Architectural Design of Designer Liu Ji Piao. Journal of Nanjing Arts Institute (Fine Arts & Design), pp. 137—141.
- Forty, A., 2000. Words and Buildings: a Vocabulary of Modern Architecture. Thames & Hudson London.
- Gao, X., Peng, N., 2017. The concept and practice of "fine art architecture" at the hangzhou national art college the Chinese adaptation of French modern painting. Time + Architecture 5, 142–149.
- Gombrich, E.H., 1950. The Story of Art: with 370 Illustrations. Phaidon Press.
- Hearn, M.K, Smith, J.G, 2001. Chinese Art: Modern Expressions. Metropolitan Museum of Art.
- Hill, J., 2003. Hunting the shadow-immaterial architecture. J. Architect 8, 165—179.
- Hill, J., 2005. Criticism by design: drawing, wearing, weathering. J. Architect 10, 285–293.
- Hussey, C., 2019. The Picturesque: Studies in a Point of View. Routledge.
- Kao, M.M., 1972. China's Response to the West in Art, 1898-1937. Stanford University, Palo Alto, CA.
- Kemp, M., 1990. The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat. Yale University Press, New Haven, CT.
- Kostof, S., 2000. The Architect: Chapters in the History of the Profession. Univ of California Press.
- Lai, D., 2006. Record of Important Architects and Architectural Firms in Modern China. China Water & Power Press, Beijing.
- Lai, D., Wu, J., Xu, S., 2016. Door Open: Westernization and Modernization of Chinese City and Architecture. China Architecture Industry Publishing, Beijing.
- Lever, J., 1984. The Art of the Architect: Treasures from the RIBA's Collections. Trefoil, London.
- Li, F., 1924. First Chinese art exhibition of Chinese in Europe. Strasbourg exhibition. Eastern Miscellany 21 (30–36), 40–43.
- Liu, J., 1924. Danseuses du Palais impérial (Dancers from the imperial Palace). Catalogue of Exposition Chinoise d'art Ancien et Moderne in Strasbourg.

- Liu, J., 1928a. 'Company', Contribution: the Special Number for Liou Kapaul, vol. 3.
- Liu, J., 1928b. 'Conference Hall', Contribution: The Special Number for Liou Kapaul, vol. 3.
- Liu, J., 1928c. 'Drunk Moon Hall', Contribution: the Special Number for Liou Kapaul, vol. 3.
- Liu, J., 1928d. 'Façade of the Martyrs Shrine', Contribution: the Special Number For Liou Kapaul, vol. 3.
- Liu, J., 1928e. 'Market', Contribution: the Special Number for Liou Kapaul, vol. 3.
- Liu, J., 1928f. 'Martyrs Shrine Plan', Special Issue Of Central Daily News, Section Art Movement No. 18.
- Liu, J., 1928g. 'National Library Plan'. Special Issue of Central Daily News.
- Liu, J., 1928h. 'Parliament Plan'. Special Issue of Central Daily News section Art Movement No. 15.
- Liu, J., 1928i. The relationship between colour and sentiment', *contribution*. The Special Number for Liou Kapaul 3, 36–42.
- Liu, J., 1928j. 'Theater', Contribution. In: The Special Number for Liou Kapaul, vol. 3.
- Liu, J., 1928k. 'Villa', Contribution: the Special Number For Liou Kapaul, vol. 3.
- Liu, J., 1929a. 'Cenotaph in Memorial of Prime Minister's Death in Guangzhou, vol. 26. Eastern Miscellany.
- Liu, J., 1929b. 'Fine Arts Architecture and Engineering', China Traveler: the Special Number for Liou Kapaul Esq, vol. 3.
- Liu, J., 1929c. 'National Government Architectural Design -Entrance Perspective', vol. 26. Eastern Miscellany.
- Liu, J., 1929d. 'National Government Architectural Design General Plan', vol. 26. Eastern Miscellany.
- Liu, J., 1929e. 'National Government Architectural Design Top View', vol. 26. Eastern Miscellany.
- Liu, J., 1929f. 'Tha Marble Ball Room of Paris', China Traveler: the Special Number for Liou Kapaul Esq, vol. 3.
- Liu, J., 1928l. 'Fine Arts Buildings: Introducing Mr Liu Jipiao', vol. 5. Special Issue of Central Daily News, pp. 59–61.
- Liu, J., 1928m. Fine arts buildings: introducing mr Liu Jipiao', contribution. The Special Number for Liou Kapaul 3, 12–16.
- Lotz, W., 1977. The rendering of the interior in architectural drawings of the Renaissance. Studies in Italian Renaissance Architecture.
- Lu, Y., 2018. Modern architecture: image and imagination in the mass media of early modern Shanghai. Architectural Journal 3, 18—24.
- Lu, Y., Lei, X., Zhao, L., 2016. Mass media and professional magazines in early 20th-century shanghai:their influence on the evolution of modern Chinese architecture. World Architect 1, 26—33+127.
- Ota, S., Inoue, N., 2005. Chinese architectural and construction drawings from the qing dynasty. In: The Collection of the Institute of Oriental Culture at the University of Tokyo. Institute for Advanced Studies on Asia, Tokyo.
- Pérez-Gómez, A., Pelletier, L., 2000. Architectural Representation and the Perspective Hinge. MIT Press, Boston.
- Powell, H., Leatherbarrow, D., 1982. Masterpieces Of Architectural Drawing. Orbis.
- Scolari, M., 2012. Oblique Drawing: A History of Anti-perspective. MIT press.
- Sirén, O., 1985. The walls and gates of Peking. In: .
- Stamp, G., 1982. The Great Perspectivists. Trefoil Books Ltd.
- Sullivan, M., 1996. Art and Artists of Twentieth-Century China. Univ of California Press.
- Sun, F., 1928. The ripples on the water heads for infinity. Contribution, The Special Number for Liou Kapaul 3, 1—5.
- Thorpe, A., 2016. Performing China on the London Stage. Springer.

- van Zanten, D., 1977. Architectural composition at the ecole des beaux-arts from charles percier to charles garnier. In: Drexler, Arthur (Ed.), The architecture of the Ecole des Beaux-Arts. Martin Secker and Warburg Limited, London.
- Wang, K., 2009. The Emergence of Modern Chinese Architecture Discourse: A Study on the Modern Transformation of Chinese Architecture Discource (1840-1937). Tongji University.
- Weng, T., 2014. Study on Design Works and Theoretical Thinking of Liu Jipiao. Tongji University.
- Wittkower, R., 1953. Brunelleschi and proportion in perspective. J. Warburg Court. Inst. 16, 275–291.
- Wong, J., 2013. The Chinese Art Deco Architect of the 1925 Paris Expo 'My Grandfather'. the Newsletter, Section the Studt.

- Wu, M., 1924. Architectural beauty. art criticism 45, 6-7.
- Xing, P., 2018. Involvement of arts and identity of architects in China early architecture exhibition. Decoration 2, 80—83.
- Xu, S., 2010. The Born of Chinese Modern Architecture. Tianjin University Press.
- Xuan, L., 2010. The Research on the Establishment of Chinese Architects' Social Identity through the Neoteric Architecture Exhibition in Shanghai. Urbanism And Architecture, pp. 120–122.
- Zheng, H., 2013. Blending China and West to Create Chinese New Architecture: Liou KiPaul's "Art Architecture" and its Interpretation. South Architecture 77—85.
- Zhu, J., 2013. Architecture of Modern China: a Historical Critique. Routledge.