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A 30-year controversy over the Shanghai East China Electric Power Building: the creation and conservation of late 20th century Chinese architectural heritage*

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Abstract

The Shanghai East China Electric Power Building, which was completed in 1988, is widely accepted as one of the first postmodern high-rise buildings in Shanghai. Based on articles published in mass media and professional magazines, interviews with relevant stakeholders and social media debates, this paper focuses on two controversies regarding the building's peculiar architectural form. The first occurred between 1988 and 1992, when the building's postmodern appearance aroused heated debates among architectural professionals. The second happened between 2015 and 2018, when the building's postmodern appearance was planned to be replaced with a slated Art Deco surface during its renovation into a boutique hotel. This paper reveals how a thirst for 'form innovation' emerged in the specific social and professional environment shortly after China's opening-up, and how professional and public awareness of the value of late 20th century architectural heritage was stimulated in the early 21st century in the search for an alternative representation of urban identity other than the widely accepted Art Deco style. This paper emphasises the public meaning of architectural forms in arguing for institutional co-operation in systematic evaluation and conservation legislation for late twentieth century Chinese architectural heritage sites to maintain the historical diversity of the cityscape during urban regeneration.

Keywords: Architectural form, Architectural conservation, Postmodernism in China, Urban identity, 20th century Chinese architectural heritage

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Introduction

The Shanghai East China Electric Power (SECEP) Building, located at 201 Nanjing Road, was the first super high-rise building (higher than 100 m according to Chinese building acts) in Shanghai's historic Bund area when it was completed in 1988 (Fig. 1).[1] The SECEP Building was initially an extension of the former American-funded Shanghai Electric Co. Building, an Art Deco-style office tower designed by Hazzard Co., Ltd. and completed in September 1931, which was used as the East China Electric Power Administration's electric power control headquarters and scientific and technological information centre (Yang 1984).[2] The SECEP Building has an extraordinarily outstanding presence in the historic built environment because of its volume (with a height of 125.5 m including the 100.5-m main body and the 25-m upper microwave tower), its façade of red tiles, the distinct 45-degree angle turn of the floor plan and the protruding plastic roof form. The SECEP Building has been generally recognised and has won many awards for its architectural and structural designs since its completion,[3] and is considered one of the first postmodern design works in Shanghai.

However, the SECEP Building has also sparked controversy ever since its completion. Over the past 30 years, there have been two major debates regarding its peculiar form. The first occurred from 1988 to 1992, soon after the completion of the building, when its distinctive 'postmodern' form became the target of criticism particularly due to its location in the central historic environment. The second took place from 2015 to 2018, subsequent to the reporting in social media of an intended renovation scheme to turn it into a high-end hotel with a slated Art Deco-style surface. The mutual focus of controversy was its architectural design, mainly its bizarre form compared with its historic urban context. If the first debate resulted from a thirst for form innovation against the plain modernist buildings at the early stage of China's economic boom and architectural blossoming, the second conflict exposed a long ignorance of the historical value and conservation schemes for Shanghai's late 20th century Chinese architectural heritage. Following efforts from different agencies, the SECEP Building finally preserved its initial postmodern appearance and become an iconic case for awakening professional and public awareness on maintaining the historical diversity of Chinese cityscapes.

This paper investigates these two controversies in detail based on the materials collected from professional media, mass media, social media and interviews. It introduces the SECEP Building's creation and conservation process, reveals the changing historical background of the controversies and emphasises the public meaning of architectural form in the urban context. It argues for the significance of maintaining the historical diversity of the cityscape during urban regeneration.

Towards an innovative architecture: creation and the first debate (1988–1992)

The creation of the SECEP building in the context of 'postmodernism theory fever'

Between 1949 and 1978, only two buildings above 24 m were built in Shanghai due to China's economic restraint and the policy of sacrificing living for industrialisation. In contrast, 812 high-rise buildings were erected during the 1980s (Xiu 2015), while a comparable number were constructed in the 1990s to accommodate a bigger population and prop up real estate values (Chang 2017). Apart from the SECEP Building, two other high-rise buildings near East Nanjing Road appeared, the Lianyi Building (1985) and the Shanghai Telecommunication Building (1988) (Fig. 2). Although these buildings were completed in the same period, these two other cases represented the mainstream design approach to high-rise buildings at that time, namely, a simple cubic form based on economic, functional and technological concerns.

The design of the SECEP Building was also restricted by various functional, economic and technical requirements put forward from various stakeholders, including the strict dimensions of the interior spaces demanded by the various electric power-dispatching functions, the tight budget within 20 million CNY and the extreme construction site conditions (Wang 1985). However, the

[1]The related articles use several different names to refer to the building located at 201 Nanjing Road, including the Electric Power Control Building, East China Electric Power Control Building, East China Electric Power Management Building, East China Electric Power Administration Building, East China Electric Dispatching Building, East China Electric Power Dispatching Building, General Dispatching Building of Shanghai East China Electric Power Administration Bureau and East China Electric Power Building. The name for the site that we have adopted in this article is in accordance with the Commemorative Envelope for Celebrating the Completion of the East China Electric Power Building (1988.12.27) co-issued by the Shanghai Stamp Company and East China Electric Power Administration (Liu 2017).

[2]The building property and land use rights initially belonged to the East China Grid Corporation, while the building was designed by ECADI. It was constructed by the Shanghai No. 4 Construction Engineering Company. The principal architects of the East China Electric Power Building were Xinyang Luo and Yong Qin. The design process began in 1982 and the building was completed in 1988. The site area covered 4200 m^2, while the floor area amounted to 28,410 m^2.

[3]The awards won by the SECEP Building included the Top Ten Outstanding Buildings in Shanghai on the 40th Anniversary of the People's Republic of China (PRC) (1990), the Top Ten Outstanding Works of Chinese Architectural Art in the 1980s (1990), First Prize in the Shanghai Excellent Design Award (1990), Second Prize in the Shanghai Science and Technology Progress Award (1991), Excellent Building in Shanghai on the 50th Anniversary of the PRC (1999) and the Architectural Creation Grand Prize of the Architectural Society of China on the 60th Anniversary of the PRC (2009).

Fig. 1 Location of the SECEP Building (Source: East China Architectural Design & Research Institute [ECADI])

form of the SECEP Building turned out to be more than an economic cube. The main building contained one underground storey plus 26 above-ground storeys (including two interlayers), while its annex had four storeys that connected its glass pitched roof with the building at 181 Nanjing Road. The building was set at a 45-degree angle from Nanjing Road. The main building was a cast-in-place steel-reinforced concrete vertical column with a core cast-in-place concrete horizontal shear wall. The form was further complicated by the cantilevered or indented volumes and the different height combinations of each floor. The floor slabs consisted of dense-ribbed cast-in-place steel-reinforced concrete (Wang 1985). A projected volume was later added on the 21st floor as the control room and a tower was added above this for microwave emission equipment (Fig. 3). In addition, the construction conditions were challenging (Yan and Chen 1988) because the ratio of the site area to the building base was 5:4; thus, vehicles could not cross the construction site. Almost no passage was possible around the site. The surrounding buildings and pipelines were old and fragile. The bustling adjacent Nanjing Road made daytime construction impossible. Therefore, the construction process had to be arranged meticulously and technical emergency measures had to be ready at all times.

According to its architects, the SECEP Building's form not only resulted from the restrictions of its site but also from its spatio-temporal context.

On the temporal side, the SECEP Building is located in the most prominent historic urban area of Shanghai, surrounded by a number of heritage buildings, such as the Gothic Revival-style Shanghai Holy Trinity Church (c. 1869), the classic British-style former Carowitz and Co. Building (c. 1899), the Art Deco Shanghai Electric Co. Building (1929–1931) and a renowned clothing store

called Laou Kai Fook and Co. (1935–1936), among other office buildings and alleyway housing (*lilong*) neighbourhoods that were constructed during the early 20th century (Chang 2005).[4] The architects' main concern was how to express the zeitgeist of the 1980s in China during its new stage of opening-up, economic reform and cultural boom, as well as how to showcase the importance of architectural creations with fresh architectural forms that differed from functional boxes (Fig. 4).

On the spatial side, the early 1980s saw the prevalence of 'architectural creation' (*jianzhu-chuangzuo*), which simultaneously increased with the influence of postmodernism, primarily from the United States. Searching for historical and traditional references became a new architectural direction. Chinese architects went from being functional technicians to artistic creators. Under such circumstances, the architects of the SECEP Building summarised their three objectives regarding its form (Qin and Wang 1989): first, to embellish Nanjing Road without impairing its existing built environment; second, to maintain traditional architectural styles without contradicting local characteristics; and third, to reflect the newness of 1980s Chinese architecture. The result was the first Chinese interpretation of postmodern design aesthetics. The top section of the main volume was cut at a 56-degree angle. This, together with a 45-degree rotation on the horizontal plan, was implemented to reduce the building's volume as much as possible to relieve its pressure on neighbourhood buildings and streets (Fig. 5). The historicist symbols adopted here included triangular windows modelled on the roof windows of neighbouring *lilong* houses and a pentagonal window alluding to the pointed arches of the nearby Shanghai Holy Trinity Church (Fig. 5). To be coherent with the surrounding historical buildings, which had bare red brick walls and sloping red-tile roofs, the entire building was covered with red tiles. A counter-example here was that early in the design process, the image of *dougong* (the bracket sets, i.e., the wooden elements between the columns and roof) borrowed from Chinese traditional buildings was adopted on the façade but was later eliminated for not being in line with Shanghai's built environment, considering that the Bund area used to be part of the International Settlement and is dominated by Western-style architectural heritage sites.[5]

In both senses, the SECEP Building has acted as a pioneer for Chinese postmodern architectural design and has influenced the aesthetics of subsequent high-rise buildings in Shanghai. The towers constructed in the 1990s around the Bund section of Nanjing Road no longer exhibited cubic shapes (Fig. 2).

Newness vs. ugliness: debate on architectural form

However, a fierce debate began as soon as the building was completed. This debate took place mainly in the pages of the architectural journal *Time + Architecture* (Fig. 6), This first debate (1989–1992) addressed the appearance of the SECEP Building and its innovative architectural form and involved vehement discussions with both emotional and rational standpoints raised.

Directly under the spotlight was the intuitive aesthetic judgement shown by the architectural design. Some condemned the SECEP Building for its bizarre appearance and excessive volume, referring to it as an 'electric tiger' lying along Nanjing Road or a monster lurking in the Bund area (Zhao 1992, 14) (Fig. 7a, b). In response to these scathing rebukes, Xinyang Luo and Yong Qin (Luo and Ai 1988; Qin 1988; Luo 1989), the principal architects of the SECEP Building, immediately provided their explanations in a series of *Time + Architecture* articles in 1988 and 1989. They explained that their environmental concerns were the implicit influence on their design of the building's form. That is, the seemingly discordant pitched-roof tower and the 45-degree angled plan were meant to improve the over-crowded atmosphere along Nanjing Road and embellish the skyline of Shanghai's Bund area (Fig. 7c, d). Moreover, the architects believed that a large number of high-rise buildings with even larger volumes would be constructed around this area in 10 or 20 years' time, which would make the SECEP Building far from striking (Luo 1989).

While these criticisms focused on the building's appearance, such as the top outline imitating the sloping roofs and triangular windows referencing the surrounding *lilong* houses, censure during the debates even extended to the issue of political and moral correctness (Luo 1989; Zhao 1992). To refute these attacks, various architectural theories were employed in defence of the building's aesthetics. Considering it a break from the tedious box-like modernism, others acclaimed the postmodern form of the SECEP Building for its composition and, additionally, for its positive impact on the urban public space. They referred to various architectural concepts from, for example, Bruno Zevi's *The Modern Language of Architecture* and the visual principles of Gestalt psychology (Wang 1990), to support their ardent opinions. Less-emotional analyses included, for

[4]Other heritage buildings include the former Jiujiang Building (1921) to the east and quite a few other historic buildings are in the neighbourhood, such as 271 Middle Jiangxi Road Building (1900), Midland Building (1916–1930), 230 Jiujiang Road Building (the former Dah Sung Cotton Spinning and Weaving Co. Building, built in 1919–1920) and the Ezra Building (1930).

[5]Shiling Zheng was interviewed by Xiahong Hua and Jiawei Liu in 2016.

Fig. 2 High-rise buildings in the Bund section of Nanjing Road built from 1980 to 1999 (Source: Photographs from the Internet)

Fig. 3 Model of the SECEP Building during the design process (Source: Yang 1984)

example, that of Weiyan Zhao (1992), which was based on a questionnaire survey. Zhao (1992) compared the SECEP Building with John C. Portman Jr.'s Shanghai Centre (1990), another building under dispute, and probed the relationship between their physical forms and aesthetic experiences. Moreover, Professor Tianwei Mo (1990) from Tongji University believed that such debates stemmed from ignorance of the specific architectural creation process, thereby overlooking rational aspects and rejecting individual exploration, which was, in his opinion, undoubtedly acceptable. Another typical argument in this debate held that the abstract symbols retained a concise form without sacrificing its historical connection, thus creating a new Shanghai style (*haipai*), based on the local past but oriented towards a global future (Xu and Hua 1989).

Thirst for form innovation and theoretical guidance at the early stage of the Chinese architectural boom

These debates should not be taken as simple positive or negative attitudes towards the SECEP Building. Rather, they are meaningful historical sceneries that reflect a thirst for form innovation at an early stage of China's rapid urbanization and architectural boom after more than 30 years' ideological restraint for Chinese architects when only economic and functional productions were accepted. While the contradictory responses resulted from the scarcity of up-to-date architectural knowledge and design methodologies and the uncertainty for the effect of limited new design strategies, a desperation for 'theoretical guidance' (*lilun zhidao*) is a natural consequence.

That is why a distinguishing feature of the 1988–1992 debate about the SECEP Building was the enthusiastic usage of miscellaneous theoretical vocabularies borrowed from the West, not only in the architectural professional articles but also in mass media, such as topological transmutation (*tuopubianxing*), environmental psychology/behaviour (*huanjing-yishi*), cultural context (*wenmai*), regional/national/epochal (*diyuxing/minzuxing/shidaixing*), postmodernism (*houxiandaizhuyi*), metaphor (*yinyu*) and architectural language *(jianzhu-yuhui*) (Zhang 1990). The unquestioning adoption of the Western academic terms together with the heated debate of architectural form exactly mirrored the contemporaneous practical and intellectual conditions of Chinese architecture shortly after China's opening-up.

On the one hand, the focus of China's reform and opening-up in the 1980s gradually shifted to urban development, which encouraged a henceforth stable and rapid urbanization process, as well as an 'international city craze', namely over 40 cities aimed to become international cities within 10 or 20 years to catch up with economic globalization and urban internationalization trends worldwide (Zhou and Cao 1999). Encouraged by development policies for coastal areas implemented by the Sixth Five-Year Plan (1981–1985) (Zhou and Cao 1999) and transformation of land development and construction rights regulated by *Interim Regulations of the People's Republic of China Concerning the Assignment and Transfer of the Right to the Uses of the State-owned Land in the Urban Areas* (1990) (Chang 2017), an upsurge in economic development and urban construction had begun in Shanghai. The partial effect of this nationwide rapid urbanization was homogenised cities that comprised mainly indistinguishable economical modern buildings (Zhang 1992).

On the other hand, a wave of Western architectural theories was introduced to China in the 1980s, which triggered a fervour of architectural discussion and stimulated a passion for architectural creation. In the 1980s, the Chinese architectural discipline was gradually extricated from the control of political ideology (Wang 2018). Thus, importance was reattached to architectural creations to settle the problem of architectural homogenization due to political and economic constraints (Zhang 1985; Zhu 2008). Academic exchanges with the West resumed, mainly

through the translation of architectural theories[6] (Bao 2005), which included environmental psychology, human engineering, comparative culture studies, cultural anthropology, architectural semiotics, architectural hermeneutics, architectural morphology, architectural typology, postmodernism and deconstructionism (Zhang 1992). These theories were treated as shortcuts and efficient approaches to design methods for improving Chinese architectural design; therefore, they were vigorously pursued by scholars and architects alike (Wang 2019).

Although stripped of its context and sometimes simplified in Chinese translations, as the then latest idea in architectural thought, postmodernism appeared to be a panacea for the Chinese problem of tedious similarity in architectural forms. Postmodernism allowed a much freer way of using historical references, which encouraged the desire for ground-breaking innovation in the 1980s, initiated the unique practice of postmodern architecture in China, helped to terminate the dichotomic traditional/modern thinking and prepared the conditions for the growth of pluralism in Chinese architecture (Wang 2006; Li 2014; Wei 2018; Wang 2019). Moreover, as the Chinese understanding of architecture became more comprehensive, terms like 'integrated architecture' (*guangyi jianzhuxue*) were coined, which urged architects to consider the environmental and cultural aspects in facilitating original local architectural designs (Zou et al. 2009). Architectural design practices during the final decades of the 20th century were increasingly derived from local culture and history; this captured the postmodern zeitgeist (Yuan 1984; Dai 1986; Zhou 2011; Huang 2014).

Towards an urban identity of temporal diversity: conservation, renovation and the second debate (2015–2018)

The SECEP Building had undergone two major renovations in the new millennium. From 2000 to 2003, the exterior façade was renewed and its interior was redecorated (Fig. 8). Lin Tung-Yen and Li Guo-Hao Consultants Shanghai Co., Ltd. was responsible for this first renovation. Aside from the reinforcement of the structure, the changes to the building's appearance during this renovation included the attachment of a sight-seeing elevator onto the chamfer facing Nanjing Road, enlargement of certain windows, alteration of the glass ceiling at the entrance into a terraced shape, renovation of the exterior façade tiles and finish while retaining a similar dark colour, and energy-saving alterations to the glass curtain wall of the four chamfers. Because the form of the building did not undergo radical modification, this renovation did not receive much attention.

The second renovation of the SECEP Building, initiated in 2013, was regarded as one of the Shanghai Municipality's urban renewal 'experimental projects', which aimed to set the standards for similar cases. The building property rights were transferred from East China Grid Corporation to the Luneng Group Co., Ltd. and the building was to be converted into a boutique hotel (Fig. 9). This renovation triggered a series of contentious debates about building forms and the issue of heritage values and conservation legislation, especially for the long-ignored late 20th century architectural heritage sites, became a new theme in this round of discussions.

Renovating the SECEP building into a boutique hotel

Between the 1990s and 2010s, large-scale demolition and new construction was the dominant approach to urban development in China. Even though the forms of individual buildings tended to be diverse, the loss of historic buildings and urban landscapes made the cityscapes appear increasingly identical, which largely led to the loss of urban identity and global competition. The particularity of urban cultures and heritage sites have subsequently received more attention (Xue 2009). Considerable efforts have been made to preserve the

[6]The major architectural journals, including *World Architecture* (*Shijie jianzhu*), *The Architect* (*Jianzhushi*), *New Architecture* (*Xin jianzhu*) and *Time + Architecture* (*Shidai jianzhu*), published nearly 300 translations during the 1980s. The famous one translations that originally appeared as serial articles in *The Architect* were shortly after reprinted into a book series 'The Architect Series' (*Jianzhushi congshu*). Another important series 'Translation Series of Architectural Theory' (*Jianzhu lilun yicong*) constituted 11 books (Bao 2005). The Architect Series included the following books: Bruno Zevi's *Architecture as Space: How to Look at Architecture* (English version, 1974; Chinese translation, 1985); Bruno Zevi's *The Modern Language of Architecture* (English version, 1978; Chinese translation, 1986); Yoshinobu Ashihara's *Exterior Space Design* (Japanese version, 外部空間の設計, 1975; Chinese translation, 1985); Christian Norberg-Schulz's *Existence, Space and Architecture* (English version, 1971; Chinese translation, 1985); Charles Jencks' *The Language of Postmodernism* (English version, 1977; Chinese translation, 1986); and Kevin Lynch's *The Image of the City* (English version, 1960; Chinese translation, 1990) (Bao 2005). The Translation Series of Architectural Theory included the following books: Peter Collins' *Changing Ideals in Modern Architecture, 1750–1950* (English version, 1965; Chinese translation, 1987); Nikolaus Pevsner's *Pioneers of Modern Design From William Morris to Walter Gropius* (English version, 1949; Chinese translation, 1987); Geoffrey Scott's *The Architecture of Humanism: A Study in the History of Taste* (English version, 1974; Chinese translation, 1989); Eliel Saarinen's *Search for Form: A Fundamental Approach to Art* (English version, 1948; Chinese translation, 1989); Geoffrey Broadbent's *Design in Architecture: Architecture and the Human Sciences* (English version, 1973; Chinese translation, 1990); Robert Venturi's *Complexity and Contradiction in Architecture* (English version, 1965; Chinese translation, 1991); Geoffrey Broadbent, Richard Bunt and Charles Jencks' *Signs, Symbols and Architecture* (English version, 1980; Chinese translation, 1991); Amos Rapoport's *The Meaning of Built Environment: A Nonverbal Communication Approach* (English version, 1982; Chinese translation, 1992); Steen Eiler Rasmussen's *Experiencing Architecture* (English version, 1964; Chinese translation, 1992); Manfredo Tafuri's *Theories and History of Architecture* (English version, 1980; Chinese translation, 1991); and Roger Scruton's *The Aesthetics of Architecture* (English version, 1979; Chinese translation, 1992) (Bao 2005).

Fig. 4 Heritage architecture sites surrounding the SECEP Building (Source: Based on photographs provided by ECADI)

historical and cultural features of Shanghai's built environment (Zheng 2017).[7] However, buildings less than 30 years old are not protected under Shanghai's heritage conservation laws.

Situated in Shanghai's Bund Historical and Cultural Area, which was designated in 2003 (Fig. 1), but not yet listed as a heritage architectural site, the then 25-year-old SECEP Building was transformed into a hotel in 2013 together with the neighbouring Shanghai Electric Co. Building, which was listed in the third batch of Outstanding Historic Buildings issued by the Shanghai Municipal Government in 1999. This meant that the Art Deco style of the 1931 building, together with its colour and details, were officially protected and required to be maintained. However, the problem was whether the unprotected postmodern form of the SECEP Building should be maintained.

Postmodernism vs. art deco: the second debate on form conservation

This renovation project constituted an extensive and cautious process filled with uncertainties and consultations, including two rounds of design scheme selections (Fan 2018; Peng and Dong 2018). The first round began in April 2013 and ended in December 2014. Four design companies were invited, namely, ECADI, SCDA Architects, NEXT Architects, and Neri & Hu Design and Research Office. The two Art Deco proposals (NEXT-1 and NEXT 2, as shown in Fig. 10) from NEXT Architects were nominated in September 2014.

On 20 December 2014, Professor Di Lu from Tongji University posted on a Sina Microblog the NEXT Architects' two shortlisted schemes, which transformed the postmodern building into an Art Deco-style building. The post drew widespread attention from architecture professionals and mass media alike. The shared standpoint in this animated debate was that the postmodern appearance of the building exemplified Shanghai's architectural heritage and the collective memory of Shanghai's urban culture and should therefore be preserved. An article in the *China Youth Daily* (Wang 2013)

[7]Preservation laws and regulations have gradually been established. The Shanghai Municipal Government issued the *Administrative Measures for Outstanding Historic Buildings of Shanghai in Modern Times* in 1991 and the *Regulation for the Conservation of Historical and Cultural Featured Areas and Outstanding Historic Buildings* in 2002. In 2003, the *Regulations of Technical Procedures for the Restoration of Outstanding Historical Buildings* were issued by the Shanghai Construction and Administration Committee. Twelve original historical and cultural featured areas were not only designated but also subsequently extended. By 2005, 632 historic building sites in Shanghai were officially designated as Outstanding Historic Buildings. The number of these buildings increased to 1058 over the following 10 years. Moreover, conservation practices based on extensive investigations also began, such as the renovation and redevelopment projects of *lilong* houses (typical modern buildings completed before 1949) or that of industrial architectural heritage sites.

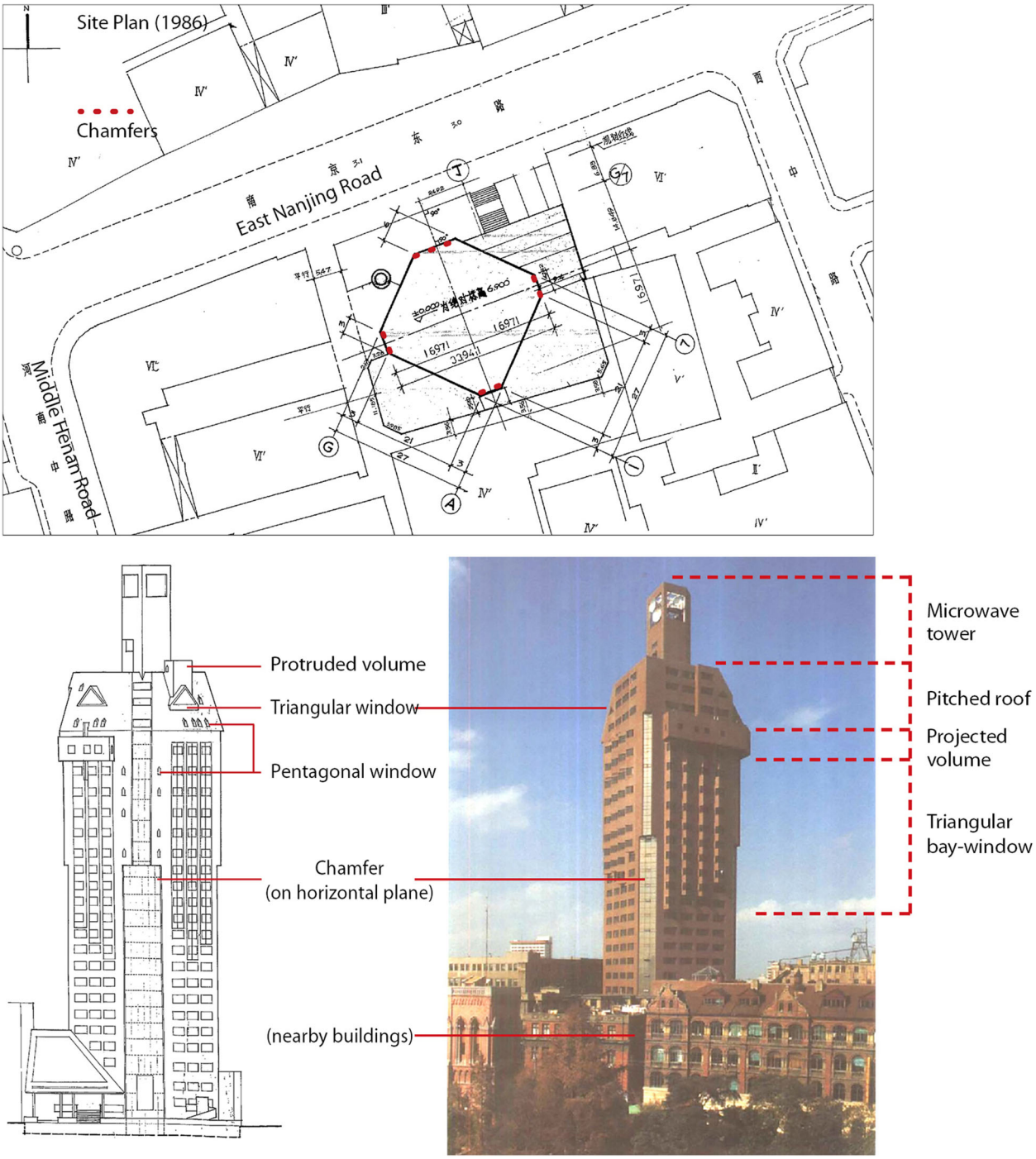

Fig. 5 Form composition of the SECEP Building (Source: Based on the drawings and photograph from ECADI)

honoured the building as an emblem of postmodern reform in the 1980s; hence, this 'postmodern reform' label became a frequently used synonym for the building. Other reports acknowledging the building's value published in the *Jiefang Daily* and *Wenhui Daily* (Shen 2015; Zhao 2015) were repeatedly reprinted in full by other mainstream media, such as the Sina and Sohu web portals.

Facing substantial public objections, the first round of proposals were rejected. In January 2015, after a meeting organised by the Shanghai Municipal Administration of Planning, Land and Resources (SMAPLR), architectural experts and administrators reached the consensus that 'the architectural features should be preserved, the city memory should be

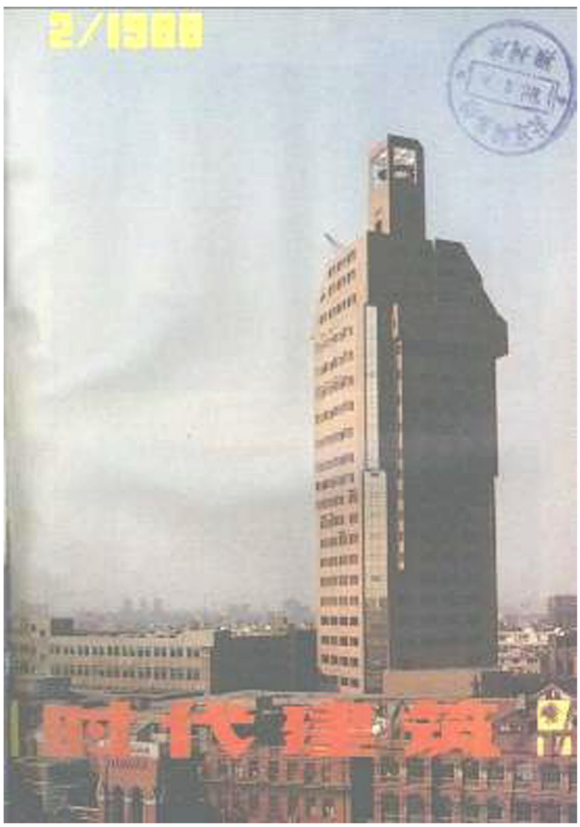

Fig. 6 Cover of *Time + Architecture* (Issue 2, 1988)

continued.'[8] A second round of the design competition began. In addition to the earlier four companies, the Original Design Studio, an affiliation of the Tongji Architectural Design (Group) Co., Ltd., was invited to join the competition.

The two rounds of the design competition produced more than 50 schemes in total, with different architects having differing attitudes towards the original form. Among these design proposals, we identified 23 schemes that represent the diversity of these design attitudes (Fig. 10), which could be categorised into three groups according to their strategies in dealing with the architectural form, namely, transformation into Art Deco style, adjustment of the existing form and disguised with a completely new style. Twelve of the proposals, including the first two proposals by NEXT Architects (NEXT-1 and NEXT-2), the fourth ECADI proposal (ECADI-4) and proposals one to nine by SCDA Architects (SCDA-1 to SCDA-9), wrapped the building with an additional layer of a modified Art Deco façade. This emphasised the hard-edged vertical lines and echoed the elevation of the neighbouring Art Deco building. The second category comprised all three proposals by the Neri & Hu Design and Research Office (Neri & Hu-1 ~ Neri & Hu-3), two ECADI proposals (ECADI-2 and ECADI-3) and one proposal by the Original Design Studio (ODS-1). These proposals removed all the changes from the 2000–2003 renovation and the connection between the two buildings, and either proposed minor adjustments or manipulated the original features of the building (Fig. 11). The last three SCDA designs (SCDA-10 to SCDA-12) radically erased the features of the existing building by adding a new curtain wall system.

In June 2015, ECADI was selected as the architectural design team. Following legislation released by SMAPLR on 22 June 2015, which required the 'utmost preservation' of the original architectural characteristics, including the main body, the plastic roof and the triangular windows as 'the collective memory of the city',[9] the final design has largely preserved the original style. Before the final decision was made on 7 November 2015, ECADI provided 11 more design schemes with only minor variations for the annex and the top tower.

The final renovation is a co-operative project between ECADI and Neri & Hu Design and Research Office, who will provide the architectural and interior designs, respectively. Although replaced with new window sets and curtain walls, four distinctive features from the original buildings were strictly preserved, including the whole silhouette of the high-rise building together with its iconic red tiles, the long vertical triangular windows, the L-shaped projected long horizontal window, the sloping roof and the microwave tower on the top. Eventually, on 15 June 2017, the construction drawings were completed.

However, the public and professional debates about the project continued even after the design selection was concluded. It is worth noting that the discussion among the architectural professionals went beyond emphasising the value of the building's postmodern form. Instead, they posed other serious questions, such as increasing awareness about the diverse forms of contemporary architecture as well as optimising policy and legislation on architectural and urban heritage protection (Wu 2015; Archplus 2016; Shen and Zheng 2016). Prominent examples include the two forums held by ECADI (Fig. 12). In 2016, the Quadrilateral Dialogue on Urban Regeneration forum began a dialogue among the representatives of Shanghai's municipal government, the developers, designers, public media and societies. The forum's agenda constituted three aspects. First, it focused on collaboration between the four parties of public media, government authorities, property owners, and

[8]SMAPLR, 'Minutes of Expert Consultation Meeting on the Exterior Facade Design Scheme of the Renovation Project of Building 201 of Nanjing East Road, 20 January 2015.

[9]SMAPLR [2015] no. 9, 'Notice of Requirements for the Planning and Design of the Renovation Project of Building 201 of Nanjing East Road'.

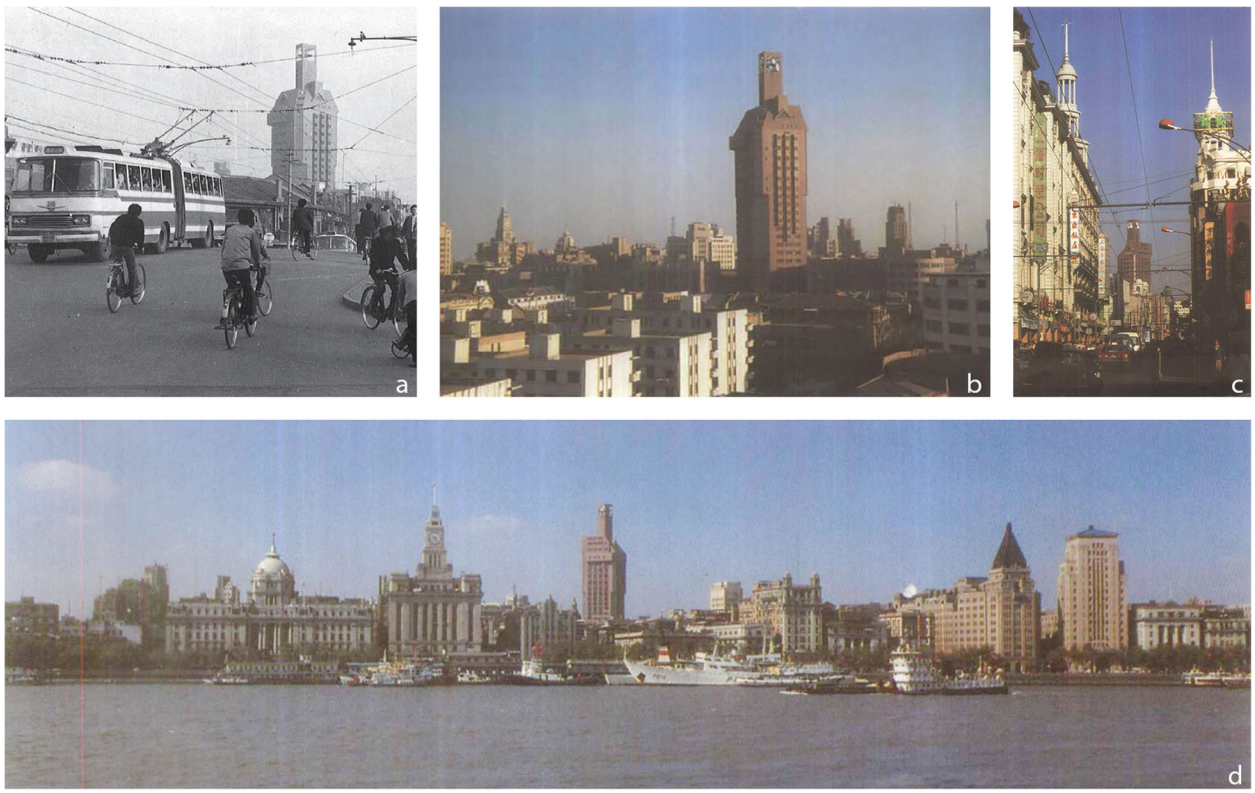

Fig. 7 SECEP Building in its urban context in the late 1980s and early 1990s (Source: **a** ECADI; **b**–**d** Xiao 1991)

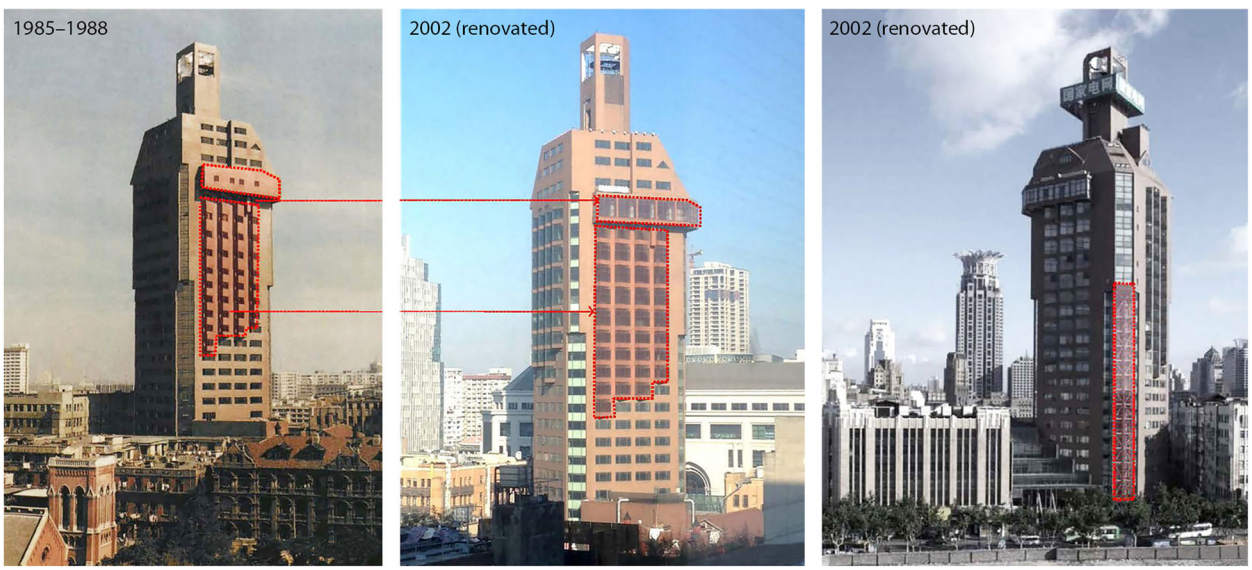

Fig. 8 Modifications of the SECEP Building's form during the 2000s (Source: Based on photographs provided by ECADI)

Fig. 9 Condition of the SECEP Building before renovation and an artist's rendering of the chosen renovation scheme initiated in 2013 (Source: Images provided by ECADI)

design and construction companies. Second, it took up the balance between economic concerns and historical and cultural considerations. Finally, it addressed the need to improve legislation for the conservation of outstanding contemporary buildings not protected by current laws and regulations. The third agenda point later became the focus of a special column on the renovation of the SECEP Building and the preservation of China's modern architectural heritage, which was published in the sixth issue of *Time + Architecture* in 2018. The article provided further reflection on the systemization and legislation of modern architecture conservation (Peng and Dong 2018). Moreover, another forum held earlier the same year reiterated the gravity of protecting the diversity of architectural forms.

Achieving a recognizable urban identity through architectural conservation

The 2015–2018 discussions indicated that architectural form is an indispensable medium for the pluralistic composition of urban history and culture. In the case of this renovation project, the form of the SECEP Building was nearly replaced by the region's prevailing historical Art Deco style because the value of the building itself was overlooked (Fig. 13). Shanghai's identity was too easily stereotyped by the classic styles of the Bund and/or the high-tech modern looks of Lujiazui, while other post-1949 historical periods were under-appreciated. According to Qing Chang (2019), the main architectural trends in the post-1949 China can be subdivided into two stages. The 1950s were characterised mostly by neoclassical styles with more Chinese features integrated during the following two decades. Essentially, architecture before the 1980s followed neoclassical and eclectic styles, while the final two decades of the 20th century witnessed the blossoming of architectural forms with distinctively local understandings and expressions that explored the modernization of local traditions. These trends in Shanghai's late 20th century architecture have taken place at an unprecedented scale and speed since the 1980s. The temporal layers add up to a recognizable urban identity. Therefore, one historical period can by no means replace another.

Another critical issue concerning heritage protection in China is the age of buildings. As Song Zhang (2018) noted, the conservation criteria relating to age fall into four categories, namely, buildings constructed before 1949, buildings over 50 years old, those over 30 years old and no specific requirements. These categories exclude those outstanding buildings built during the late 20th century, such as the SECEP Building. This once again exemplifies the under-appreciated and unprotected status of Shanghai's late 20th century architecture and impedes the conservation of the stylistic diversity that constitutes Shanghai's recognizable urban identity.

Subsequent damage to the building's exterior and its possible prevention

The renovation project of the SECEP Building had progressed relatively smoothly through the close co-operation of the property owners, design company, government authorities and public media. SMAPLR organised consultation meetings throughout the selection process, during which the mass media played a supervisory role. The government also

Fig. 10 Renovation proposals for the SECEP Building (Source: Images provided by ECADI)

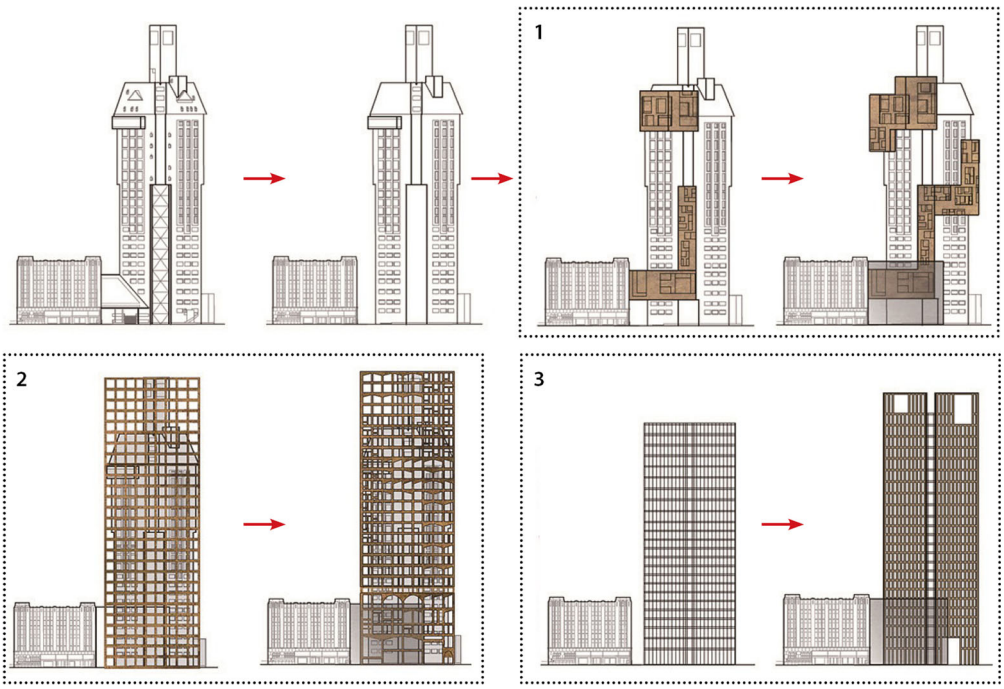

Fig. 11 Diagrams of three renovation proposals of Neri & Hu Design and Research Office (Source: Figures provided by Neri & Hu Design and Research Office)

Fig. 12 Posters for Quartet Dialogue on Urban Regeneration (2016) and Debate on East China Electric Power Building (2018) (Source: ECADI)

Fig. 13 SECEP Building in its urban context after renovation (2018) (Sources: **a**, **b** Fan 2018; **c** Peng and Dong 2018)

Fig. 14 Exterior facade coated with lacquer (construction site and details) (Sources: **a** Fan 2018; **b**, **c** Wu 2018)

issued key documents to protect the building. Mutual concessions were also made. The design company compromised on the hotel's functions. Maintaining the form of the SECEP Building also presented technical difficulties. Two more service elevators for the restaurant in the microwave tower inevitably resulted in small changes to the pitched roof (Fig. 9). The government authorities made compromises on the unavoidable minor changes to the building's original form as well as permitting an annex to be built along the road boundary line to ensure the surface continuity of East Nanjing Road. Additionally, the property owners also made compromises. They bore the economic loss caused by the prolonged design process as well as the extra costs for the preservation of the original façade. The planned wedding room in the microwave tower, which would have provided excellent views of the Huangpu River, was also cancelled due to the fire protection code (Fan 2018).

The opening of the boutique hotel in June 2018 was unsurprisingly not a happy conclusion to this renovation project. On 12 December 2018, the exterior surface of the former SECEP Building was observed to be coated with lacquer (Wu 2018) (Fig. 14a). Worse still, the hotel management company ignored requests from its ECADI design company, SMAPLR and the Shanghai Police to stop its construction activities and restore the original façade. However, the coating process continued even more rapidly and the damage to the façade was a foregone conclusion (Fig. 14b, c).

However, the flexible and interactive conservation measures in the case of the SECEP Building were generally exemplary, especially given that it had no legal heritage protection as a contemporary building. This is also why at least two problems were responsible for the subsequent damage to the exterior façade. First, the property owner's awareness of the value of this late 20th century building was insufficient. Second, there was no corresponding legislative support. Therefore, there was a lack of pressure and regulatory protection after the renovation project was completed.

Conclusion: the value and protection of late 20th century Chinese architecture

Late 20th century Chinese architecture, as exemplified by Chinese postmodern architecture, was created at a time when both the architectural discipline and urban development were experiencing unprecedented transformation. The influx of miscellaneous Western architectural theories largely enriched Chinese architectural knowledge and design methods, which the swift urbanization process offered abundant opportunities to explore and realise. As a critical example, the SECEP Building was designed at a time when the obsession with styles such as Art Deco and high modernism changed. Postmodernism ushered in a new, innovative era in architectural practice in China (Wang 2018; Chang 2019). The diverse architectural styles created during the final two decades of the 20th century contrasted with the previous cubic modern forms, and in return, enhanced Shanghai's urban identity. Postmodernism added a rich layer of temporal meaning and shaped the city's image towards culturally sustainable development in the global era.

However, the late 20th century Chinese architectural heritage remains relatively under-appreciated and systematic conservation efforts are still lacking. Even though the latest Chinese 20th Century Architectural Heritage Listing Criteria, established by the 20th Century Architectural Heritage Committee of the Chinese Society of Cultural Relics, has acknowledged contemporary Chinese architecture (1949 to the mid-21st century) (Zhang 2018), the postmodern 1980s–1990s buildings have yet to be sufficiently included as heritage sites. Even more, this hitherto academic heritage inventory has only limited legal guarantees. The flexible co-operative preservation methods used in the renovation of the SECEP Building are thus an exemplary case before concrete inventories and legislation for late 20th century Chinese architectural heritage were established.

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Authors' contributions
Jiawei Liu drafted the article. Xiahong Hua proofread the draft as the advisor and undertook the final two revisions. The authors read and approved the final manuscript.

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