



WHAT IF? WHAT NEXT?

SPECULATIONS ON HISTORY'S FUTURES

SESSION 1A

MODES OF ARCHITECTURAL HISTORY

Ecologies of History: Histories of Ecology

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“APPLICABILITY, ECONOMY AND ATTENTION TO BEAUTY WITH LIMITATIONS”: THE ORIGIN AND VALUE OF A 1950s CHINESE ARCHITECTURAL DESIGN STRATEGIC GUIDELINE

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In 2015, in response to global warming and the diminishment of resources, China proposed a new design strategic guideline “Applicability, Economy, Green and Beauty,” based on an earlier model. In 1956, seven years after the establishment of the People’s Republic of China (PRC) the Central People’s Government had formally established an architectural design strategic guideline, “Applicability, Economy and Attention to Beauty with Limitations” (AEB) which set out the goals and guided the direction of architecture design in response to its new national identity. The official newspaper, People’s Daily, established by the Chinese Communist Party (CCP) provided the main platform for the promotion of AEB, during an era when specialist architectural publications were largely non-existent. Significantly, until 2015, AEB continued to function as the main strategic guideline; it was foundational to Chinese architecture design for over half a century.

While several Chinese scholars have investigated the origins of AEB, a number of key questions relevant to its interpretation remain, however, to be fully explored. ‘What did the proposal of AEB mean to China in the 1950s?’; ‘what role did AEB play in the development of the Chinese architecture profession?’; ‘why did People’s Daily, as a mass media outlet pay attention to architectural issues in the 1950s?’ and ‘how did its coverage impact upon the Chinese architecture profession?’ These questions remain largely unanswered.

Based on records and reports on AEB, this paper proposes that the birth of AEB was the result of the combined effects of domestic economic and political conditions, and Soviet architectural design ideology. The formation of the AEB documented a shift in thinking and discourse, from “the importance of design” to “design thoughts”, and marked a turning point in the process of systematic theorization within the field of architecture in China, and continues to impact upon the profession today.

Strategic Design Guidelines: Addressing contemporary needs

In the early 1950s, in the face of the wasteful use of resources, bribery, and corruption exposed in the beginning of infrastructure construction, the Chinese Communist Party (CCP) launched the Three-Antis campaign in order to reduce all non-military expenses, and to stimulate the lagging national economy. At the time, the architecture and construction industries had not yet recovered from the trauma of war. Due to the lack of regulations and norms of construction work, many construction sites suffered from problems such as material waste and demolition. Thus, as a result, 'Waste in Architecture' became a central concern of the government.

People's Daily, the authoritative newspaper established by the CCP, had done an in-depth report on waste in construction at the time. From the end of 1950 to the middle of 1951, the fact that many firms' constructions lacked design, or were built without a plan, was exposed. On June 16 1951, *People's Daily* published an editorial, "Mei You Gong Cheng She Ji Jiu Bu Ke Neng Shi Gong" (Translation: "Impossible to Construct without Design"). The text emphasized the importance of "design before construction", and detailed what design is.¹ In addition, a clear explanation of the relationship between "design" and "plan" was also provided followed by an interpretation of the architectural design process.² As a result of the severity of the construction waste caused by the lack of design, through the mouthpiece of the *People's Daily*, the government chose to popularize "design" related knowledge and promote the importance of "design" through official channels.

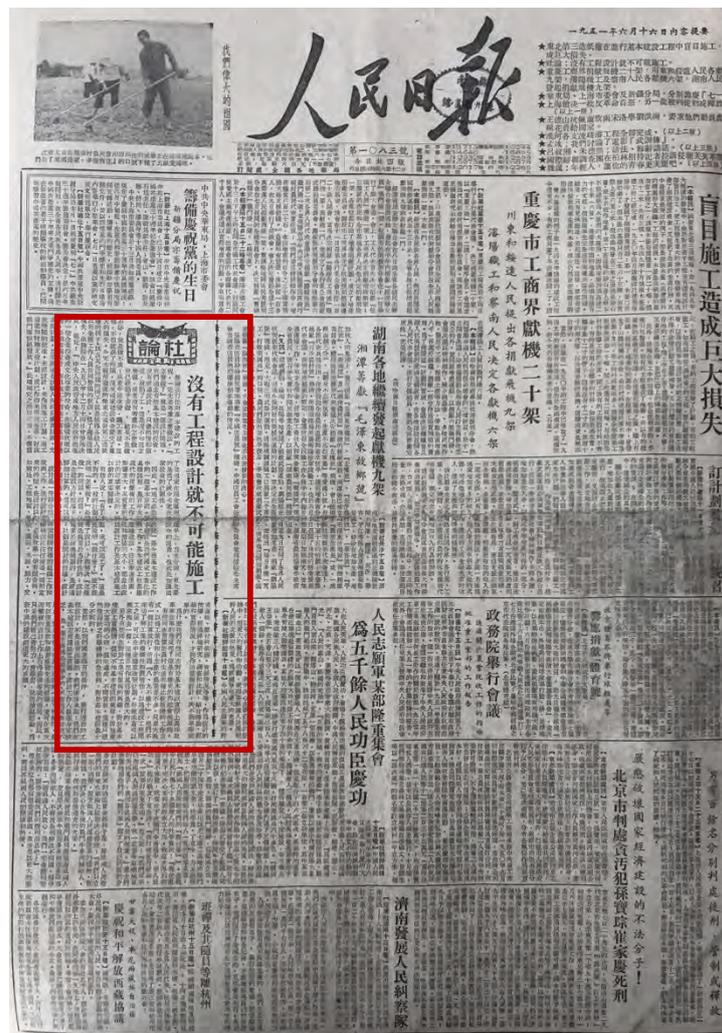


Figure 1. The front page of *People's Daily* on June 16, 1951. The text in red square is the editorial "Impossible to Construct without Design".³ Source taken by author in Suzhou library.

The editorial initiated a heated discussion on the topic of "design before construction",⁴ which lasted for 15 months. From early 1951 to the middle of 1952, more than 70 related articles were published.⁵ The hotly-contested discussion on "design before construction" indicates that "design" is an essential part of the infrastructure construction received greater attention in Chinese society, albeit with the understanding that the general understanding of architecture and construction being rather limited. At that time, the existing construction methods and working models were unable to meet the requirements of huge infrastructure construction tasks. The Chinese architectural field urgently required reform and innovation in management regulations and working strategies in order that the construction industry respond to contemporary needs.

"Beauty" and Soviet Influence

The architectural design guideline was first proposed and discussed in the First National Conference on Architecture and Construction (FNCAC) held by the Financial and Economic Commission of the Central People's Government Council from July 2 to 16 1952. In the discussion, problems on "Beauty" were raised.

The architect Tao Zongzhen, who attended the FNCAC, recalled that there were two different opinions raised in the conference as to the content of the guideline. By considering the economic situation in the PRC in the early 1950s, most of the people supported "Applicability, Strength, Economy" as put forward by the vice-chairman of the Central Government of PRC, Zhu De, who thought that the issue of "Beauty" in architecture design could wait to be discussed until the economy had developed.⁶ However, some specialists (Tao being one) argued that "'Beauty' in architecture design does not need to be expensive. Economy is the essential precondition (of design), but the design guideline should always be 'Applicability, Strength and Beauty'. Beauty and economics are not contradictory."⁷ It is apparent that both proposals came from Vitruvius's three attributes: *firmitas* (strength), *utilitas* (utility), and *venustas* (beauty).⁸ The difference between the two opinions lies in people's different understanding of "Beauty" in architecture design. The most striking observation from the discussion on the content of the guideline appears on the limitation of Chinese society's understanding of architecture as a discipline at that time.⁹ This limitation is not only reflected in their single awareness on the expression of "Beauty" in architecture design, but also on neglecting "Beauty" as the necessary condition of architecture as an independent discipline to reflect its particularity in Chinese society at that time.

"Beauty" in Chinese architectural design is a complex issue. In the late 1920s, the first group of architecture students who studied overseas gradually returned to China and started their design practice. In order to establish the uniqueness of the architecture as a profession and compete for the architectural marketing that was monopolised by civil engineering.¹⁰ The term "artistic" architecture began to be used by architects to emphasise the distinction between architecture and "civil engineering."¹¹ Thus, if "Beauty" was not included in the guideline, it meant that the "artistic" quality of architecture set up by Chinese architects in the 1920s as distinct from civil engineering would be questioned, which would have been very unfavourable to the development of architecture as an independent discipline in China.

Fortunately, with the suggestion of the Soviet expert in architecture and urban planning A.S. Mukhin, who came to China to help with the infrastructure construction, "Beauty" was finally kept in the guideline. According to Tao, when the two sides were locked in disagreement over proposals, Mukhin was invited to give advice. After hearing from both sides, Mukhin explained that:

'Applicability, Strength, Beauty' does not conflict with the economy. However now [in 1952] in the Soviet Union, it is no longer referred to as 'Applicability, Strength, Beauty' but 'Applicability, Economy, Beauty' because the building techniques are different from those in ancient times and therefore 'Strength' is no longer an issue.¹²

Moreover, Mukhin pointed out that "Economy" was a necessary consideration in large-scale socialist construction. Considering China was going to start the first Five-year plan, he suggested that "economy" should also be included in the principle.¹³

Tao did not specify how Mukhin explained the importance of "Beauty" in architectural design and how it is not in conflict with "economy". Nevertheless, from another important article by the famous Chinese architectural expert Liang Sicheng (Fig. 2), we can clearly find that Soviet experts represented by Mukhin's insistence on the thoughts of "architecture is art" had a huge impact on the Chinese architectural field at that time. In Liang's text "Su Lian Zhuan Jia Bang Zhu Wo Men Duan Zhen Le Jian Zhu She Ji De Si Xiang" (Translation: "Soviet experts help us correct our design thoughts") published in *People's Daily* on December 22, 1952, he said that:

One of the very important architecture thoughts that introduced from the Soviet Union to China was the affirmation that 'architecture is art'... With the help of Soviet experts, we affirmed the artistry of architecture and urban construction. We used to use 'Applicability, strength, economy' as the three elements of architecture design. More than once, Mukhin tells us, this view is one-sided and narrow. Mukhin used to say 'Socialist architecture must be not only be convenient, economical, but also beautiful... From the contacts with Soviet experts, we realized that the idea that 'Beauty does not matter, once there is a house to live in' is wrong.¹⁴



Figure 2. Soviet experts A.S. Mukhin and Chinese architecture experts (From left: Liang Sicheng, Wang Jiqi, A.S.Mukhin, Wang Wenke).¹⁵

In the early years after the PRC was founded, due to the backward economic and technological situation, the Chinese government adopted the "One-sided" policy of learning from the Soviet Union in order to strengthen the construction of national infrastructure. From 1949 to 1960, more than 40 Soviet experts came to China to help with urban construction. At that time, Soviet experts had authoritative discourse power among the decision making in the construction activities. Among them, A.S. Mukhin was the most influential.¹⁶ Before coming to China, A.S. Mukhin had rich practical experience in architecture and urban planning in the Soviet Union. He worked as an assistant to the famous Soviet architect Alexey Viktorovich Shchusev, and collaborated with him on the urban planning of the southern Soviet city of Sochi. What Mukhin brought to China was indeed not only his architectural knowledge but the most representative architecture and urban planning thinking and design methods used in the Soviet Union at that time.

In the early 1950s, "Learning from the Soviet Union", was not only a policy but also a mandatory movement that was organized and planned by the government.¹⁷ Although the guideline was not be settled immediately after the FNCAC, both the Chinese government and the professional architectural field recognized and valued "Applicability", "Economy" and "Beauty". "Beauty" in architectural design was a main focus. In the report made in the founding assembly of the Chinese Architectural Society in October 1953, the vice-president of the Chinese academy of science, Zhang Jiafu claimed that "our architecture design must conform to the principle of "Applicability, Economy and Beauty"¹⁸. Also, Zhou Yang, the vice-minister of the Publicity Department of the CPC Central Committee, gave more emphasis on "architecture is art". Zhou said that "Architecture is art, but it is different from other arts. It needs to meet people's needs ... both material and cultural."¹⁹

"Correct Design Thoughts"

Meanwhile, as Liang said "since architecture is a kind of art, the issue of design thoughts is worth our attention".²⁰ When architectural field concerned "Beauty", the publicity of *People's Daily* also made the topic of "design thoughts" valued by all of the Chinese society. From January 1953 to October 1953, the newspaper published four editorials on its front page emphasizing the importance of "Design thoughts". In the editorial titled "Bi Xu Zheng Que De Jing Xin She Ji Gong Zuo" (translation: "Must carry out design correctly") published on January 17, 1953, it was argued that "In order to complete the current design task and improve the design quality, we must also solve the problem of design thinking. That is to say, (we) need to adopt the advanced technical standards of the Soviet Union, and set up the idea of "economy" in the design".²¹ On January 25, 1953, in the editorial named "Fan Dui She Ji Zhong De Bao Shou Luo Hou Si Xiang" (translation: "Against the conservation thoughts in design") *People's Daily* pointed out that "In facing the large-scale infrastructure construction, we must pay attention to the current backward situation in design. We must regard it as an urgent task to improve the design thoughts and enhance design capacity."²²

While *People's Daily* called on the public to attach importance to "Design thoughts", it also offered a definition on "Correct design thoughts". In its editorial, "Wei Zheng Que De She Ji Si Xiang Er Dou Zheng" (translation: "Fight for correct design thoughts") published on October 14, 1953, it was written that:

There were two design thinking in the design, one is Capitalist design thinking²³ which aims for the highest profit. Designers are employed by the capitalist to realize his/her wishes and at the same time to improve his (designers') reputation and material benefits. Thus, Capitalist design thinking are isolated, short-sighted. They are without a national and collective concept, often being conservative and backward...Another is Socialist design thinking which is the correct design thoughts. It considers how to make the most rational use of national resources, how to build the most efficient enterprise with the least capital...we must learn from the socialist design thoughts, especially learn from the Soviet Union.²⁴

In *People's Daily* at that time, it is clear to see that thinking coming from the Soviet Union was regarded as advanced and correct; on the contrary, thinking from Capitalist countries was regarded as outmoded and wrong. There are two possible explanations for this finding. On the one hand, it could be due to the influence of "Socialist Realism" theory, which brought the political class struggle terms into architectural discourse. On the other hand, the newspaper's focus on architectural thoughts seems also to have had its political aims. Most of the Chinese intellectuals in the 1950s had studied in Europe and the USA. The Western value system which they have already accepted conflicted with the Marxist-Leninist ideology at various levels. In order to raise Marxism-Leninism to the level of national ideology, in early 1950s, CCP started intellectual ideological remoulding.²⁵ This suggests that the initial criticism of "Capitalist design thinking" and promotion to "Soviet design thoughts" in *People's Daily* was a reaction to Marxist-Leninist ideology and extended to the field of architecture. Furthermore, the main reasons why the newspaper continued to pay attention to the architectural field in the early days of the founding of the PRC appears related to the following two points: the needs of the realistic national conditions; and the lack of a professional architectural journal.

In the early 1950s, under the theme of "infrastructure construction", architecture and construction were inevitably the concerned of the Party and the State. Thus, the focus of *People's Daily* on architecture design could be interpreted as an attempt to stick to the theme of the domestic political climate. Moreover, the lack of any architectural specialist periodical was also a factor that could not be ignored. After the Sino-Japanese war (1937-1945), several excellent Chinese architectural professional publications ceased to exist due to economic instability and manuscript exhaustion. As a consequence, the Chinese architectural profession was without its own media outlets. It was not until 1954, with the support of the Ministry of Construction that the *Architectural Journal* was founded along with other publications.²⁶

Under the promotion of *People's Daily*, "Applicability, Economy and Beauty" which was proposed under the suggestion of Soviet experts had been well accepted by the society. However, the influence of Soviet architectural thinking on China was two-sided. While the concept of "architecture is art" influenced the architectural field, and elevated architectural design thinking, Soviet "Socialist Realism" design theory limited its development.

"Beauty", with Possible Conditions

According to architectural historian Ander Aman, from 1932 onwards, modern architecture was thrust aside (in the Soviet Union) in favour of the new traditionalism, dubbed Socialist Realism.²⁷ While "function" and "form" were the basic concepts of modernist architecture, "socialist content and national form" were the bases of Socialist Realism theory committed to presenting "the new" based on tradition, whilst ascribing to the tenets of architecture as art.²⁸ At that time, Socialist Realism theory and "socialist content, national form" proposed that the main artistic task of architecture is to reflect the greatness and superiority of the socialist regime through external image.

In the early 1950s, Soviet architecture displayed a retrograde tendency with monumental architecture adhering to Russian classicism and Baroque styles.²⁹ At the same time, the influence of Soviet experts on Chinese architectural design went to deep, the spread of Socialist Realism in China evolved into a blind pursuit of the nostalgic and decorative appearance of architectural design by major design institutions, which vastly increased construction costs and caused massive waste in the process of infrastructure construction (Figs 3 and 4).³⁰ In order to counter these excesses, in early 1955, the government officially launched the "Anti-Waste movement" thus calling into question the meaning of 'Beauty' in terms of practical buildings. Key concerns of the architectural profession were: how could "socialist content and national form" be expressed?

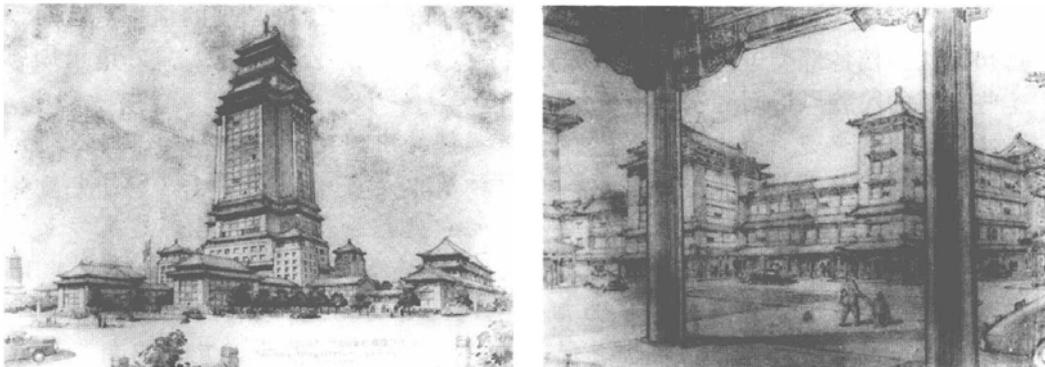


Figure 3. "The imaginary building" drawn by Liang Sicheng in 1954.³¹



Figure 4. Perspective of the teaching building of Northwest Minzu University.³²

The Anti-Waste Movement was founded upon the reconsideration of the dialectical relationship between "Applicability," "Economy" and "Beauty". From February 4 to 24, 1955, the Ministry of Construction held an Architectural and Construction conference, where the issue of the content of the guideline was discussed again. In the conference, the guideline ultimately defined as "Applicability, economy and attention to Beauty with limitations." This was officially announced by the Central People's Government in 1956.³³

Wan Li, the vice-minister of the Ministry of Construction, made a clear explanation of AEB in the conference report in 1955. Wan explained that:

Any building must follow the principle of 'Applicability, economy and attention to Beauty with limitations'...No matter whether architect, structural engineer or equipment engineer, their design must first satisfy the needs of users and make users feel comfortable and convenient. In the meantime, they need to set up the notion of economy and conscientiously and responsibly establish the economic and technical indicators to make every building applicable and economical. 'Beauty' also needs to be considered. But what we want is to pay attention to 'Beauty' based on 'applicability' and 'economy'.³⁴

The likely intentions that could be interpreted from Wan's report are the sequencing issues of the three critical terms considered by both the Chinese government and the Chinese architectural society. 'With limitations' appears to suggest that the three terms need to be considered in order in the design process. As such "Applicability" and "Economy" are not only the essential condition of architectural design, but also prerequisite of "Beauty". It is clear that "with limitations" emerges as a means to redress the mistake caused by "Socialist Realism". As to the state of the Chinese architectural industry in the 1950s, the qualifier of "Beauty" also appeared as a necessity. Despite in the early 1950s, China already had a group of excellent architects and architectural experts who were well educated in both China and Western countries, the vast majority of architects and architectural relevant workers in China still had a superficial understanding of architectural design. For the questions of how to express "Beauty" in architecture, quite a few designers might not have a clear idea. Like Chinese architecture expert Liu Shiyong said that "different from 'Applicability' and 'Economy', 'Beauty' is hard to define with numbers and specifications. Therefore, 'limitation' is used to control the deviation in architecture aesthetic."³⁵

Conclusion

In general, the problem of "waste in architecture" which was exposed in "Three-Antis" campaign brought the importance of "design" to the attention of Chinese society, putting the discussion of design strategic guideline front and centre. At that time, when productivity was low and the economy faced numerous difficulties, "Applicability" and "Economy" became the two most important keywords in architecture design recognized by the government and the architectural profession. In the meantime, under the policy of learning from the Soviet Union, the emphasis on "architecture is art" addressed the controversy surrounding the concept of "Beauty". With "Applicability, economy and attention to Beauty with limitations" put forward as the definitive guideline.

The establishment of the AEB guideline sought to address issues pertaining to Chinese architecture and its national conditions. Among them, the process from controversy to the affirmation of the word "Beauty" not only reflects a deeper understanding of "architecture is art" in the Chinese architecture field, but also plays a crucial role in maintaining the architectural discipline's uniqueness. The dissemination and associated discussions of "Beauty" by the *People's Daily* enabled the issue of 'design thoughts' to become a both professional and social issue, the newspaper providing a platform for all spheres of society to discuss architecture and construction-related topics. And while the relationship of the newspaper with the CCP on occasion resulted in overtly political statements, it nonetheless, documented the shift of Chinese architecture from the recognition of the importance of "design" to the "design thought", thus playing a vital role in the development of modern Chinese architecture.

Liang claimed that “With the improvement of social productivity as well as the changes of daily lifestyle, the criteria of “Applicability” and “Economy” is always changing, and “possible conditions” for “Beauty” are always subject to variation. We must obtain the unity of “Applicability, Economy and Beauty” according to the different circumstances.”³⁶ Since the 1950s, great changes have taken place in China. In order to adapt to current and future needs, the Central People’s Government revised the guideline to “Applicability, Economy, Green, Beauty” at the end of 2015. “Green” is the forward position in the architecture field in the present world. It is also the feature of global architectural discourse and practice.³⁷ Thus, on the one hand, “Green” in the guideline represents a concept of sustainable development in architecture, on the other hand, it also refers to the green building technology. However, some experts believe that in the era with economic and cultural diversity, “Beauty” should no longer be preceded by qualifiers.³⁸ Although compared with the 1950s, the economic conditions have greatly improved and the pursuit of “Beauty” in architecture design is no longer limited to the exterior decoration of buildings, phenomena such as “Figurative architecture” (Figs 5 and 6) and “Plagiarism”(Figs 7 and 8) are still of serious concern. Therefore, from our point of view, it is still necessary to define “Beauty” to some extent. But different from the “possible conditions” of the 1950s, it should emphasize the understanding and inheritance of social history, aesthetic culture and national identity. The issue of inheritance and innovation in the current architectural design strategic is still worthy of further discussion.



Figure 5. (L) The design concept of Guangzhou Evergrande Football Stadium designed by Gensler, USA, April, 2020.³⁹

Figure 6. (R) The design concept of Guangzhou Evergrande Football stadium designed by Gensler, USA, July, 2020.



Figure 7. (L) Office building in Zhengzhou⁴⁰

Figure 8. (R) CCTV Headquarters

Endnotes

- 1 Editorial, “没有工程设计就不可能施工” [“Impossible to construct without design”] *People’s Daily* 1951, 1.
- 2 Editorial, “没有工程设计就不可能施工” [“Impossible to construct without design”], 1.
- 3 In the 1950s, the editorial of PD usually appears on the front page, showing that editorials were the most important voice of the newspaper.

⁴ Since the middle of 1951, many people in society started to publish articles in *People's Daily* to express their understanding of "design" and their desire to promote "design before construction". For instance, engineer Xu Wenshi, published a text titled "Zen Yang Zuo Hao Gong Cheng She Ji" (translation: "How to do engineering design") in PD on August 2 1951. After explaining the comprehensiveness and complexity of engineering design work, Xu argued that "design is the most basic part of infrastructure construction. Its importance cannot be ignored". See: Wenshi Xu, "怎样才能做好工程设计?", ["How to do engineering design"], August 4 1951, 2.

Also, Liu Jushen, the manager of Chinese construction engineering corporation Beijing branch, published his text "Wo Men Zai Ji Ben Jian She Zhong Yu Dao De Ji Ge Wen Ti" (translation: "Several questions in infrastructure construction") in PD on August 10 1951. In writing, he also emphasized the importance of "design" and pointed out the problems existed in the design process, such as "the lack of responsibility of designers" and "lack of on-site inspection of the construction director". Liu also proposed that builders should correct the existing deviation and take "design" seriously. See: Jushen Liu, "我们在基本建设中遇到的几个问题", ["Several problems in infrastructure construction"] *People's Daily*, August 10 1951, 2.

⁵ "1950年代初期《人民日报》中建筑话题试析——以“先设计后施工”话题为例”, ["Research on Architectural Topics in People's Daily in the 1950s: The Discourse of "Design before Construction".] *New Architecture*, no. 3 (2020), 46-50.

⁶ Zongzheng Tao, "新中国“建筑方针”的提出与启示”, ["New China architecture policy's pointed out and its revelation."] *South Architecture* 5 (2005), 4-8.

⁷ Tao, "新中国“建筑方针”的提出与启示”, ["New China architecture policy's pointed out and its revelation"], 4-8.

⁸ Although there is no literature to record the discussion of AEB is indeed related to Vitruvius's three attributes, according to scholar Li Xiaodan from Tianjin University, Vitruvius's Ten Books on Architecture was introduced into China as early as the end of the Ming Dynasty. See: Xiaodan Li, "17~18世纪中西建筑文化交流" [The Chinese and Western Architectural Culture Communion During 17 ~ (th)-18 ~ (th) Century] (Unpublished PhD diss, Tianjin university, 2004). In addition, in the early 1950s, there were already many Chinese architecture students have returned from overseas studies, they might also have heard the Vitruvius's three attributes abroad.

⁹ According to Tao, those who took part in the discussion were all the heads and representative of different bureaus relevant to architecture and construction. See: Tao, "新中国“建筑方针”的提出与启示”, [New China architecture policy's pointed out and its revelation], 4-8.

¹⁰ Haiqin Li, *中国建筑现代转型* [Modern transformation of Chinese architecture] (Nanjing : Southeast University Press, 2004), 120-126.

¹¹ Li, *中国建筑现代转型* [Modern transformation of Chinese architecture], 237.

¹² Tao, "新中国“建筑方针”的提出与启示”, [New China architecture policy's pointed out and its revelation], 4-8.

¹³ Tao, "新中国“建筑方针”的提出与启示”, [New China architecture policy's pointed out and its revelation], 4-8.

¹⁴ Sicheng Liang, "苏联专家帮助我们端正了建筑设计思想”, [Soviet experts help us correct our design thoughts], December 22 1952, 3.

¹⁵ Hao Li, *八大重点城市规划 新中国成立初期的城市规划历史研究* [The planning of eight key new industrial cities-Urban planning history of P.R.China in 1950s] (Beijing: China Architecture & Building Press, 2019), 85.

¹⁶ Hao Li, "苏联专家穆欣对中国城市规划的技术援助及影响”, [Soviet expert Mukhin's technical assistance and influence on urban planning of China.] *Urban Planning Forum* 1 (2020), 102-110.

¹⁷ Feng Qian and Jiang Wu, *中国现代建筑教育史 1920-1980* [Education of Modern Architecture in China(1920~1980)] (Beijing: China Architecture & Building Press, 2008). Also, according to famous Chinese historian Gong Deshun, Zou Denong and Dou Yide, in the early 1950s, the government required that all recommendations and suggestions made by Soviet experts need to be followed, and the implementation would be checked irregularly by a corresponding specialist office. See: Deshun Gong, Denong Zou, and Yide Dou, *中国现代建筑史纲 1949-1985* [An outline of modern Chinese architectural history 1949-1985] (Tianjin: tianjin science & technology press, 1989), 42-50.

¹⁸ Jiafu Zhang, "在中国建筑学会成立大会上的讲话”, [Speech in the founding assembly of Chinese architectural society.] *Architectural Journal* 1 (1954), 2-3.

¹⁹ Fu Wang, "关于建筑方针的史料”, [Historical documents on architectural design strategic guideline.] *The Architect* 45 (1992), 102-107.

²⁰ Liang, "苏联专家帮助我们端正了建筑设计思想”, [Soviet experts help us correct our design thoughts.].

²¹ Editorial, "必须正确地进行设计工作”, [Must carry out design correctly.], January 17 1953, 1.

²² Editorial, "反对设计中的保守落后思想”, [Against the conservation thoughts in design], January 25 1953, 1.

²³ In some articles in PD, it was called Bourgeoisie design thoughts, representing the design thoughts from Capitalist countries.

- ²⁴ Editorial, "为确立正确的设计思想而斗争", [Fight for correct design thoughts.], October 14 1953, 1.
- ²⁵ In the early 1950s, from the central government to local governments, from government agencies to enterprises, schools, the army, all sectors and industries across the country conducted a great upsurge in learning Marxist-Leninism. The main points of learning were : 1) Labor creates the world; 2) Class and class struggle could fight imperialism; [This point emphasised the resolute struggle against imperialism, feudalism and bureaucratic capitalism from the standpoint of the proletariat]; 3) The masses are the creators of the history; 4) The Marxist view of "the state" is paramount. See: *中华人民共和国文化史 1949-2012*, [The cultural history of the people's republic of China], ed. Ouyang Xuemei (Beijing: Contemporary China Publishing House., 2016), 43-49.
- ²⁶ Noting that since PD was found in 1949, it has been in the dominant position until the present day. Thus, it is understandable that people would like to choose PD to publish their articles when there was no architectural professional periodicals.
- ²⁷ Anders Åman, *Architecture and ideology in eastern Europe during the Stalin era: an aspect of cold war history* (MIT Press, 1992), <https://liverpool.idm.oclc.org/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=cat00003a&AN=lvp.b1655006&site=eds-live&scope=site>, 49-59.
- ²⁸ Åman, *Architecture and ideology in eastern Europe during the Stalin era: an aspect of cold war history*, 49-59.
- ²⁹ Qian and Wu, *中国现代建筑教育史 1920-1980 [Education of Modern Architecture in China (1920~1980)]*, 134-183.
- ³⁰ At that time, the "big roof" form from traditional Chinese architecture was regarded as the element that can best represented the Chinese "national form" and was widely used in architecture design. It is worth noting that there is nothing wrong with the design of "Big roof". However, in order to meet the requirements of expressing "national form" in design, "Big roofs" were imposed on many buildings that did not need it. This has caused great waste to the country.
- ³¹ Source from: Sicheng Liang, *祖国的建筑* [The Architecture of the motherland], ed. Minyi Peng (中华全国科学技术普及协会[National Association for Popularization Science and Technology], 1954), 48. The main reason that resulted in the abuse of "Big-roofs" in the mid-1950s was to meet the requirements of Socialist Realism. In addition, Liang Sicheng's design thinking also had a certain influence on the pursuit of Chinese architectural tradition. This was studied by many scholars. See: Jun Wang, 1955 年, "大屋顶"形式语言的组织批评 [1955 : A state criticism of a formal language of 'the Big roof'], ed. Jianfei Zhu, *中国建筑 60 年 (1949-2009) 历史理论研究*[Sixty years of Chinese architecture(1949-2009):History, theory and criticism], (Beijing: China Architecture & Building Press, 2009), 74-99.
- ³² The teaching building of Northwest Minzu University was designed in 1953, in which "big roof" was used. Source from: ShiYang Liu, "西北民族学院艺术系教学楼," [Teaching building of Art department of Northwest Minzu University.] *Architectural Journal* 8 (1985), 68-71.
- ³³ "国务院关于加强设计工作的决定," [The Central People's Government's decision on strength design work] *ZHONG HUA REN MING GONG HE GO GO WU YUAN GONG BAO (Official journal of the central people's government of the People's Republic of China)*, no. 25 (1956), 46-51.
- ³⁴ Wang, "关于建筑方针的史料,"[Historical documents on architectural design strategic guideline], 102-107.
- ³⁵ Shiyang Liu, "拥护“适用、经济、在可能条件下注意美观”的建筑方针," [Support the architectural design strategic guideline of "Applicability, economy and attention to beauty with the possible conditions".] *South Architecture*, no. 3 (1994), 62-63.
- ³⁶ See: Sicheng Liang, "从“适用、经济、在可能条件下注意美观”谈到传统与革新," [From "Applicability, economy and attention to beauty with the possible conditions" to tradition and innovation.] *Architectural Journal*, no. 6 (1959), 1-4. Noting that the problem of "Beauty" in Chinese architectural profession was in the early 1920s. Similar to "architecture", "fine art" in China is also a derivative term. In the early 1900s, famous Chinese scholar Wang Guowei and Liu Shipei, who studied in Japan, introduced the term "fine art" into the Chinese academic context and localized its usage. Afterwards, the famous litterateur Lu Xun comprehensively promoted the use of the term "fine arts", and the implementation of arts education by the Chinese educator Cai Yuanpei further promoted the public's understanding of "fine arts". From the article produced by Lu and Cai in the early 1900s, it is clear that the thoughts of architecture as a kind of art are accepted. In the meantime, the discussion on architecture and beauty started to appear in the mass media in the early 1920s. For example, on March 3, 1924 Wu Mengfei, the chief editor of *Arts Review*, published an article named *Architectural beauty*. In the text, Wu introduced the relationship between architecture and art. Another artist who played an essential role in popularizing the concept of architecture as art was Liu Jipiao. In his first article, after returning to China in 1927, Liu first proposed the concept of "architecture as a fine art" on the basis that architecture is a kind of art. From 1927 to 1929, Liu published several articles in famous public magazines such as *Eastward Magazine* and *China Traveller* to introduce and publicise this basic concept. Thus, it could be understood that

publicity of the concept "Architecture as a fine art" was recognized through Chinese artists and architects' joint efforts, which helped the Chinese architecture profession complete the basic definition of "architecture is science and art". However, as the product of social development and national culture, architecture is closely related to its historical era. After the War, the 1950s seemed to be a new beginning for the development of Chinese architecture. Unlike the 1930s, the question of beauty was raised again in the 1950s to correct the design ideological problems. This also makes the evaluation criteria of "beauty" in Chinese architectural design have fundamental differences in the two ages.

³⁷ The World Commission on Environment and Development, chaired by former Norwegian Prime Minister Gro Harlem Brundtland, alerted the world thirty years ago to the urgency of making progress toward economic development that could be sustained without depleting natural resources or harming the environment. See: "Framing sustainable development, The Brundtland report – 20 years on", United Nations commission on sustainable development, April 2007.

³⁸ For example, architect Wu Guoli believes that "possible condition" referred mainly to the "economic condition", which have been improved today. Beyond that Wu argues that in the new era with diversified development of architecture. "Beauty" is a matter of subjective feeling, which is difficult to be defined. See : Guoli Wu, "文化多元的社会, 不应再有“建筑方针”——对“适用、经济、在可能条件下注意美观”建筑方针的再认识," [Don't exist "Construction policy" in the multi-culture society—Reconsideration on the construction policy: Applicability, Economy and Attention to beauty with the possible conditions.] *Huazhong Architecture*, no. 1 (2007), 88-89.

³⁹ In the conceptual design stage of the football pitch, Guangzhou Evergrande originally adopted the "lotus" designed project made by Gensler, USA. However, after the photo of lotus proposal was released online in April 2020 (Fig. 4, it attracted a lot of criticism due to "aesthetic" issues, and Gensler finally submitted a new proposal in July 2020 (Fig. 5), which won approval. Source from: https://www.sohu.com/a/405691923_186299, <https://www.evergrande.com/News/Details/236686>

⁴⁰ The office building in Zhengzhou were criticized by citizens for its similar to CCTV Headquarters. See : http://v.china.com.cn/news/2014-10/29/content_33901177.htm.