

Combing and Discussion of Modern Urban Planning Ideas

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Abstract Since the emergence of utopian socialism and other modern urban planning ideas, as well as the proposing of “garden cities” by Howard, modern urban planning theory has experienced a variety of planning ideas, and these ideas play a great role in guiding urban construction and planning. In this century, cities have ushered in many industrial revolutions, and urban life, economy, and ecology have changed greatly. Planning scholars in various countries are actively looking for “medicine” to save cities in the “sick”. In this paper, modern urban planning ideas were sorted out, and how to learn from the current territorial spatial planning that is being compiled around the country was thought about.

Keywords Garden city, Mechanism, Humanism, Urban planning

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1 Replacement of modern background

1.1 Changes in the political environment

From the book *Outline of the History of Western Urban Planning Ideas*, it can be learned that Western modern urban planning ideas sprouted after the bourgeois revolution represented by Britain and France in the 16th to 18th centuries, and most of them originated from the United Kingdom, largely because at the end of the 19th century, The United Kingdom established a relatively mature capitalist social system^[1]. However, the realistic capitalist system deepened the contradictions among western countries under the constant pursuit of interests, resources and surplus value. Two world wars broke out, so the world was enveloped in the flames of war. At the same time, the countries mainly represented by China and Russia are taking a new road of socialist system. In the four decades after World War II, the war ended gradually, and the United States and the Soviet Union dominated, so the world pattern was polarized. In 1991, the collapse of the Soviet Union once again changed the world pattern, and peace and development became the universally recognized theme of the world at that time. All in all, the changes in the political environment during the past 100 years have destroyed and reshaped cities, changing the planning ideas and concepts of planners and architects in various countries.

1.2 Dramatic changes in the economic environment

In the early 20th century, the book *Outline of the History of Western Urban Planning Ideas* said that the two industrial revolutions made the economic development of Western countries prosperous, but the imbalance between supply

and demand caused overcapacity. Behind the prosperity, there is a crisis. In 1929, the economic crisis broke out in the United States, and then affected the whole Western world. The market completely failed to regulate the economy. Moreover, the war also affected the economy, and the economy stagnated during the two world wars. After the war, countries began to rebuild their homes, and the economy gradually recovered. After the war, the United States became a capitalist power, and under the support of the “Marshall Plan” and the promotion of the third scientific and technological revolution, the economic development of the rest of the country was rapid. By the end of the 20th century, WTO, WBO, IMF and other economic cooperation organizations had been established worldwide, and the global economy had become more and more closely connected, showing the overall development of economic globalization. The urban planning ideas of various countries had also blossomed everywhere, showing a state of ideological confrontation with a hundred flowers^[1]. In addition, the changes in global ecological environment caused by wars and science and technology are also huge. A planner should also trace the source to think about how ancient human beings lived in harmony with the natural environment, thus influencing a series of ideas of contemporary planning scholars.

2 Combing of modern urban planning ideas

2.1 Garden urban planning idea

The book *Outline of the History of Western Urban Planning Ideas* and most scholars of other papers believe that Howard’s “garden cities” is the origin of modern urban planning theory^[2]. Howard’s “garden cities” also has many idealistic shadows. For instance, the city

is divided into a number of circular park green spaces. Although the combination of advanced urban living environment and beautiful pastoral environment is pursued, the urban residential places and natural pastoral environment are far apart, which is not conducive to the accessibility of residents living in the city to park green spaces. As a result, the circular green space is used as agricultural land for farming. Howard’s theory of “garden cities” has far-reaching significance for urban planning. It not only has great influence on modern urban planning (Xi’an and Chengdu have been promoting the building of park cities), but also has a deep influence on some later famous planning theories, integrating sociology, economy, politics and other contents into traditional planning theories. Meanwhile, the idea of “garden cities” left a deep impression on the students in the planning field in the beginning of the systematic study of modern urban planning theory.

2.2 Mechanical rationalism planning idea

2.2.1 Origin of mechanical rational planning ideas—Thinking based on modern science and technology. Since the 20th century, the scientific and technological progress brought about by the two industrial revolutions has greatly improved the social production efficiency. However, industrialization has boosted the process of urbanization, and then has subsequently affected the environment of the original shanty towns and villages in cities. Accompanied with a series of social problems such as the serious deterioration of the urban ecological environment, traffic congestion and high crime rate in cities, planners are starting to think about technological solutions to these problems. Western urban planners Howard, Gaddis and other humanists hold basically the

same concept of urban planning, but due to the changes of The Times and the development of planning technology, Le Corbusier, Gonet and others have improved the idea of urban planning, and they are full of hope for the future of modern industrial society and technology. Therefore, the Spanish engineer Mata proposed a new urban form in 1882, namely linear cities. Mata believes that in the past, a city has gradually developed from the core to the outside, leading to traffic congestion and deterioration of health within the city. Different areas within the city should be connected by efficient and convenient railways and roads, and urban residents can enter the city. Later, French architect Gonet proposed the concept of industrial cities, which was the first planner to propose functional zoning. In the book, he emphasized the thinking based on rational functions. Different elements of a city (such as towns, factories and hospitals) were separated according to their different functions, and space for their future expansion was left. The division of industrial and living spaces was emphasized. It is the germ of functional zoning.

2.2.2 Le Corbusier and his *Athens Charter*. Le Corbusier published his monograph *Glorious Cities* in 1931. On the basis of inheriting Gonet's idea of functional zoning, he proposed that modern urban construction must be centralized, and only centralized cities have vitality. The concrete idea is that high-rise buildings should be arranged in the downtown area, and when building height is increased, building density is correspondingly reduced; urban open space is used to lay out the urban park green space. Le Corbusier made use of his architectural attainments to plan the ground floor of urban buildings to alleviate urban traffic problems. It reflects his in-depth discussion of rational functionalism. At the fourth session of the Congrès International d'Architecture Moderne (CIAM) in 1933, Le Corbusier initiated and drafted the *Athens Charter*, which marked the formation of the theoretical system of modern urban planning. Among them, the most prominent content is the idea of urban functional zoning, which is not only proposed based on a series of urban diseases in the process of urbanization, but also tries to establish a model taking developed transportation system as the pillar to connect different functional areas in the city, so as to form an orderly and functional city. Although the mechanical rationality overemphasized in the *Athens Charter* is no longer applicable in the later cities, the functional zoning idea advocated by the Athenian Charter is still generally applicable in the planning of

small towns, such as some small industrial cities with natural resources as the leading industry. In the planning of these small towns, industrial, residential and commercial layout should be carried out according to the planning principle of functional zoning, which can prevent industrial areas from causing harm to residential areas, and then various functional areas are in a balanced state.

2.3 “People-oriented” planning idea

2.3.1 Three masters advocating humanism. Different from mechanism, in the history of modern western urban planning, some scholars have been aware of the social problems that rationalism could not solve, so they try to think about how to proceed with urban planning from the direction of social reform. They are Howard, Gaddis and Mumford respectively. Howard put forward the idea of “garden cities” which combines the advantages of city and country. Gaddis broke through the conventional concept of the city at that time, and proposed to take natural areas as the basic unit of urban planning research, namely the idea of regional planning. The “folk-work-place” mode of full cooperation was considered as a component of regional development. Mumford inherited and carried forward the planning ideas of Howard and Gaddis, and pushed the humanistic planning idea to the peak^[3].

2.3.2 Ideas conveyed by the *Charter of Machu Picchu*. In 1977, architects and planners from all over the world gathered at the ancient cultural site of Machu Picchu in Peru to jointly draft and sign a new charter, and the charter brings together architects, planners and academic educators to explore new aspects of urban planning and design. The *Charter of Machu Picchu* proposed the idea that planning should no longer be regarded as elite planning carried out by professionals, and emphasized that urban planning is a process of balancing social interests. Different from the *Athens Charter*, the *Charter of Machu Picchu* focuses on the relationship between people, which is particularly important in urban planning. At the same time, the planning should be dynamic, because there are obvious uncertainties in urban development. In addition, the principle of protection and preservation of natural resources and environment and historical and cultural heritage is emphasized. Therefore, compared with the past planning ideas, there has been a great change from the elite line to the people-oriented line. Urban planning is not only to plan cities but also planning at the regional level. Meanwhile, urban culture should be explored and preserved, and special and

unified planning should be carried out for the characteristic features of each city, so that the public can know the cultural pursuits of the city's residents when seeing the city. The context of the city should be preserved, because this is the manifestation of each city's unique regionalism.

2.4 Planning ideas of decentralized development

2.4.1 Saarinen's idea of organic evacuation. Saarinen, based on the realistic problems faced by urban development and urban planning at that time, proposed that decentralized urban development should be the future direction of development. Saarinen's idea of organic evacuation used bionics to regard a city as a living organism, and urban construction should follow the basic laws of nature. He thought about the concept, ideological basis and future development of organic dispersion, and pointed out that the functions within the city are consistent with the organs and tissues within the living body. This idea was used in the urban planning of Greater Helsinki, and his student Abercrombie was influenced, which was also reflected in his planning of Greater London^[4]. This idea has been passed down from generation to generation, and has also influenced Chen Zhanxiang, a student of Abercrombie. In the new urban construction plan of Beijing at the beginning of the founding of New China, Professor Chen Zhanxiang and Mr. Liang Sicheng proposed the “Liang Chen Plan”^[5], namely building a new city on the west side of Beijing, which is to follow the organic dispersion advocated by Saarinen instead of concentrated construction as in the past, and it was later reflected in China's urban planning.

2.4.2 Extreme of dispersive thought—Wright's conception of broadacre city. American architect Wright took decentralism to the extreme. Influenced by the American Enlightenment, Wright was keen on the integration of architecture and natural environment, emphasizing the harmonious coexistence of nature, human beings and architecture. His ideas can be reflected in his Fallingwater and other buildings. In 1932, Wright proposed the conception of “broadacre city” based on the premise of the American land system, that is, 59%, 39% and 2% of the land belongs to private, the state, and native Indians. In the developed United States, most urban residents own a car, so Wright believes that convenient and accessible cars can be used to connect different residential areas. Its core lies in the fact that residents living in the city can achieve economic self-sufficiency, and the rapid

development of technology can effectively solve the problems of residents' life. Urban planning has the characteristics of traditional utopian theory, which is American people's pursuit of individualism and egalitarianism. Another main reason was that the living environment of American cities was bad and the crime rate was rising. The public wanted to move to the suburbs to live a pastoral life, which reflected the idea of anti-urbanism and promoted the suburbanization of the United States after World War II to a certain extent.

2.5 Intensive and sustainable planning ideas—Thinking based on new urbanism and “smart growth”

In the second half of the 20th century, in developed countries in Europe and the United States, more and more citizens moved from the city center to the suburbs. With the decrease of the population in the core area of the city center, the weakening of the popularity of business districts, and the increase of population in the suburbs, the living environment in the suburbs became less ecological and environmentally friendly, and the crime rate in the suburbs increased. The safety of the residents' living environment can not be guaranteed. In response to the above problems, planners began to think about how to deal with urban planning, and the most representative one is the idea of new urbanism and “smart growth”. Different from urbanism, new urbanism does not pursue the disorderly spread of urban space, but advocates urban community management to form an intensive and compact living space. Community units are equipped with complete public service facilities to meet the living needs of residents in the community, so that residents can reach the destination in a comfortable walking time. For shanty towns or urban villages in cities, it is planned to improve their living environment and quality, and transform the old urban space into a revitalized city that is livable and sustainable. The strategy of “smart growth” is proposed to make urban development more in line with the needs

of human subjects. Its core lies in using urban stock space instead of planning in the form of “making a big cake” in the past, so as to reduce blind expansion and emphasize the common development of environment, economy and society. The development mode is compact, concentrated and efficient.

3 Conclusion

Since the founding of New China, the scale of urban development across the country has been expanding continuously. In the process of urban planning, planners mainly learn the urban planning ideas of the Soviet Union and Western countries. As a socialist country, China always puts the people first, and also carries out the “people-oriented” planning thought throughout the whole process of planning^[6].

For the transformation of the main social contradiction into the contradiction between the people's ever-growing needs for a better life and the unbalanced and inadequate development, urban planning should ensure the balance of people's lives and avoid the problems of inequity and injustice. For example, urban public welfare service facilities should be disposed toward the disadvantaged groups, because high-income groups generally live in areas with well-equipped public service facilities, and the residential areas where they live also have relatively high-end and complete living facilities. Meanwhile, they have economic strength to enjoy services that are not available in the surrounding areas^[7]. Therefore, the “people-oriented” planning idea should be deeply rooted in the minds of policy guides, planning workers and people.

With the emergence of global warming, atmospheric environment and other environmental problems, countries in the world are trying to improve their own ecological environment. Urban planning should inherit the way of living in harmony between people and nature. People live in nature, come from nature, and should give back to nature^[8].

The actual situation in China is merely

superficial work, simply dealing with the public participation in the planning work, and completing the necessary materials, without really caring about how to plan the place where the people live and how to build a better life that meets the needs of the people. Therefore, it is urgent to strengthen the enthusiasm of public participation.

The national land space system plan is being drawn up, and the departments of land, housing and environment are being reshuffled, and the planning industry is facing many new challenges. The study and discussion of the predecessors' theories are of great guiding significance for solving many problems in China.

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