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A New World at the End of the City - on Pastoral Urban Planning

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Abstract:
In recent years, China's urban development has moved towards deep-water areas, resulting in environmental pollution in cities; Old buildings, communal facilities, urban transportation, and a series of environmental problems, causing social concern. Through real estate construction; new area expansion; the existing models such as demolition and reconstruction to solve the current human settlement environment problems can not meet the needs of diversified development of urban environment. Therefore, seeking an intensive, efficient and convenient planning scheme in time will help to eliminate a series of existing environmental ills and contradictions in the city. It is of high value for the future development of the city, promoting the harmony of human settlements, and improving the image, comfort and livability of the city.

Keywords:
Intensive Utilization, Artificial Intelligence, Co Construction and Sharing, Convenient and Efficient, Decentralization, Public Service System

1. On the Development of Urbanization

1.1. The Process of Urbanization

From agricultural society to now, scientific and technological products liberate human beings from cumbersome and inefficient social activities, and promote people's life to develop in a convenient, efficient and intensive direction.Human settlements have also evolved from traditional settlement forms to various types of cities step by step. For the development of superior living environment and conditions, mankind has paid a huge price. The infringement of industrial products on the natural environment will eat back human society and pose a threat to life, health and living environment.

In 2020, the sudden attack of the city made the urbanization activities slow down and social activities suffered a great influence. In the face of the particularity of the plague virus and the cases of repeatedly mutated strains. How far is the harmonious coexistence between scientific and technological progress and nature?

In the middle and late stage of urbanization, stop the waste of natural resources, regulate the extensive production and construction mode, give up short-term interests in time, and reasonably optimize the urban development mode in detail. Building a more intensive, convenient and efficient city will help reverse the dilapidated environment, save natural resources and realize the harmony of human settlements.

1.2. "Decentralization" Concept

When the old renewal becomes a new tradition, the new development trend will progress towards more intensive utilization and high efficiency. In the traditional urban construction mode, "centralization" is the basis for the development of a city. Through the mode of core construction driving surrounding facilities, the coverage of urban buildings will rise rapidly in the short term.The barbaric growth of buildings leads to the large but not exquisite urban volume and breeds environmental contradictions. So many urban diseases, traffic jams, environmental pollution and other problems. And urban population congestion, rural population scarcity, environmental decline and other uneven development.

Nowadays, Kevin Kelly, in his book *Out of Control: The New Biology of Machines, Social Systems, and the Economic World* [1], put forward the "decentralization" theory, which refers to a strategy to weaken the control of the central point in the Internet world, which is opposite to the "centralization" theory, but does not emphasize the removal of the "central point". Instead, it is free to choose and determine the center, establish the connection and intersection between nodes, and oppose the idea that nodes must rely on the center.

In the "decentralization" theory, any node can become a center. Any center is not permanent, but phased. Any center is not mandatory for nodes. [2] This theory is also applicable to the later stage construction of urbanization in China.

1.3. Harmonious Construction of Human Settlements and Science and Technology

With the transfer of a large number of people to cities, the structure of human settlements has undergone significant changes. Nowadays, new technologies emerge in endlessly, the iteration of scientific and technological concepts intensifies, traditional cognition is often subverted by new concepts and technologies, and social development presents a diversified trend. In order to better make human production and construction activities accepted by the natural environment, the new urban planning concept is striving to make a breakthrough in the direction of Harmonious Co Construction of "living environment" and "scientific and technological development".

In his book *the image of city* [3], Kevin Lynch mentioned that "a city is like a building, which is divided into a big environment and a small environment. The big environment refers to the environmental relationship between space and space, and the small environment is the environmental relationship between man and space". Driven by the trend of the times, it coordinates the contradiction between space and space, man and space in the later stage of urbanization, "biotechnology" and

"Artificial intelligence" will replace the old technology and guide the co construction relationship between the three.

2. Planning of "Garden City" - A Case Study of Singapore

2.1. Liu Taige's Theory - Wise Planning

Among the existing urban planning cases, there are few cities that can be called "Harmonious Co Construction" of human settlement environment and scientific and technological development, but Singapore is a typical case. Singapore is known as the "city in the garden", benefiting from a series of environmental policies of the Singapore government.

Singapore's garden area is more than 5700 hectares, accounting for nearly 8% of the land area, which lies in the long-term policy adherence. The government encourages the popularization of the "community gardening plan", which allocates an environmental greening index of 8 m^2 per capita, encourages residents to buy flowers, plants and seedlings by themselves, and can plant their favorite plants and seedlings in public or private environments such as public places, parking lots and roofs. [4]

Liu Taige, former director of the Urban Construction Bureau, has played a key role in promoting the achievements of urban construction in Singapore. In an exclusive interview with *Caijing* magazine, he replied: "the achievement of our urban construction is to use wise planning to solve environmental contradictions. Over the years, we have adhered to our own plan, and we are very down-to-earth because we have few resources". When expounding his views, he pointed out that the urban planning concept he followed was to reasonably optimize the details of the city by strengthening the environmental dominant function of communities and satellite towns.

Strengthening the regional environmental dominant function is very important to solve the contradiction of human settlements in cities. The macro theory of urban development is important, which determines the overall regulation of urban development. However, to achieve the symbiosis between scientific and Technological Development and human settlements, efforts need to be made to improve the details of the regional environment. Seeking the fine construction of regional space is beneficial to the implantation of scientific and technological products and environmental improvement.

2.2. Co Construction and Sharing of Human Settlements

In his urban planning concept of "constellation system", the city is divided into several levels of "planning institutions". For example, cities can be divided into several "satellite areas", which are subdivided into various "satellite communities". From planning and environmental management departments at all levels to residents, we are not only planners, participants, but also beneficiaries. The management department issued Measures for specific guidance and residents; participation, enabling Singapore to achieve a delicate urban environment and achieve a co construction and shared environmental relationship. [5]

The functional needs of communities, parks, schools, sports venues, libraries, shopping malls and public service facilities can be solved nearby. People take the family as the node and arrive at the required functional node within 10 minutes of

single line travel. It avoids that a large number of people in the city travel through the city due to complex life function needs, increasing the traffic pressure of the city.

Singapore's control of urban traffic routes has basically realized the situation of science and technology implantation and diversification. The proportion of investment in public transport facilities such as urban express transportation, ferry, subway, light rail, aircraft and high-speed rail continues to increase, which is of great help to energy conservation and emission reduction and alleviate urban traffic congestion. The sustainable development of public transport will help to apply various scientific and technological practices, maximize the use of the power of scientific and technological achievements and promote social innovation.

Carry out various policy restrictions on private cars to ensure that the number of private cars is within the controllable range of urban traffic and ensure smooth traffic. In urban trunk roads, the traffic planning diversion of motor vehicles and non motor vehicles means that they do not travel on the same road surface to realize the substantive separation of functions, which is conducive to intensive management.

In terms of environmental greening, follow the environmental indicators of each region of the city. Adopt the scheme of decentralized guidance of various communities and collective responsibility of residents to control the greening area. Establish electronic archives for the growth years and locations of trunk trees. Overall, it not only saves the management and investment costs, but also solves the problem of greening the environment, but also enriches the daily life of community residents.

Singapore's urban planning provides a good living environment for the public and adheres to a forward-looking and reserved attitude towards scientific and technological development.The relationship between "residents" and "urban environment" and "scientific and technological development" has been co constructed and shared.Ranked among the top three in the world urban planning rankings for many years, it is known as the "city in the garden", which is a good case worth studying and learning.

3. Planning Conception of "Garden City"

3.1. Discussion on Traditional Theoretical Model

The planning concept of garden city was first put forward by Ebenezer Howard (1850-1928), a famous British social activist in the 20th century. According to Howard's definition of garden city: "garden city is a town designed to arrange a healthy life and industry. Its scale should be possible to meet various social life. However, it should not be too large. It should be surrounded by rural areas, and all the land should be owned by the public, or entrusted to the community." [6] The population does not exceed 32000, and there are limited amounts of urban land and agricultural land.If the urban population and industrial scale are larger than this figure, the planning department will ease the city and adjust it to other towns. (Figure 1).

According to Howard's theoretical model, it is difficult to have large and mega cities. Due to the unpredictability of history, even Le Corbusier, known as the father of modernism, devoted himself to modernist urban and architectural design all his life, can not foresee the construction industry and ecological pattern in the 21st century.

However, the traditional theoretical model provides a good foundation for the scheme. Combined with the current situation of social development, scientific

derivation is the direction of the birth of the new theory and scheme. Nowadays, the planning of "garden city" can not be understood as a simple urban beautification movement and index construction. Each element index of the city should be systematically and clearly integrated to build an urban system interconnected between science and technology industries such as "artificial intelligence" and the environment.

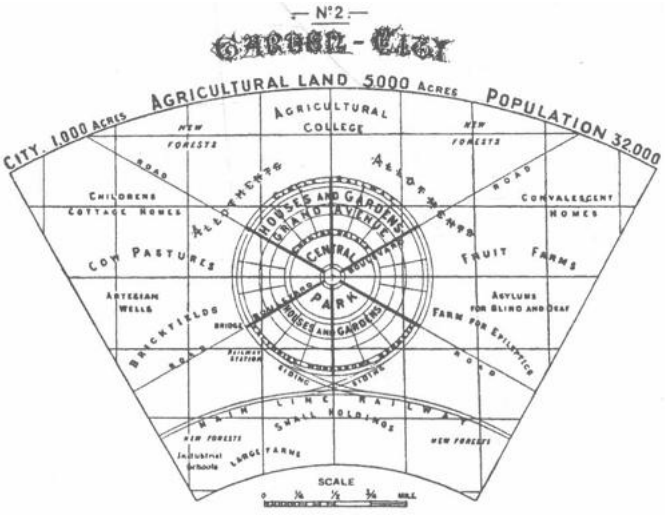

Figure 1. *Schematic diagram of Howard garden City*

Source: Ebenezer Howard'Garden Cities of To-morrow - schematic diagram

3.2. Population Intensification and Environment co Construction and Sharing

Nowadays, the siphon effect of large domestic cities on population is obvious. The relationship between urban environment and environment, environment and people has gradually become contradictory and complex. Therefore, efficient use of environmental space and harmonious living environment are the development trend of the city. [7]

The rational sharing of environmental space can generate a co construction relationship between residents and urban environment through the release of initiatives, documents and measures. Relax the authority to participate in urban environmental construction, so that residents can participate in urban environmental construction with restrictions. For example, there are limited open design authority and supervision and management authority for public environmental facilities such as large buildings, landmark buildings, parks and green spaces in the city. It can widely collect the opinions of residents on the construction of urban environmental space, coordinate the environmental needs of all parties and ease the environmental contradictions.

For the living environment of the community, implement the environmental management concept of co construction and sharing, improve residents' environmental awareness and sense of participation, bring property management into the scope of the legal guarantee system, and build more standardized and standardized residents' communities in concept. [8]

3.3. Strengthening the Power of Public Service System

The investment of public service facilities in urban construction accounts for a large proportion. The construction level of public service system is also an important evaluation standard to measure the degree of urban modernization. [9]

Compared with the envisaged future cities, the degree of public service system in most cities is still low, and there are fewer types of public service equipment in the community. There is still much room for improvement of public service systems in many cities, such as hospitals, schools, subways, high-speed railways and so on. There are still many improvements in traffic measures, and the control and management of private cars need to be strengthened.

By broadening the channels for scientific and technological achievements and new technologies to act on the public service system, we can strengthen the scientific and technological power of the public service system and make life service and travel more convenient. Let residents go out of their homes, more efficiently handle their own life services and travel, reduce the expenditure of invalid time and increase more disposable time. Make the public service system continue to play a benign role in promoting the improvement of urban environment. [10]

The top-level planning of urban development needs to be adhered to for a long time. Strengthening the planning significance of the end of the city is conducive to the implantation of science and technology and artificial intelligence products, and is an important breakthrough for the future.

3.4. Implantation of Artificial Intelligence and Micro Technology

In the public opinion, when it comes to artificial intelligence, it will subconsciously associate with high-end display technology, high-end robots, nanotechnology and other products, which are unattainable in the field of life.In essence, intelligent products have been extended to many aspects of life. The definition of intelligent products is relatively broad. For example, rice cookers equipped with intelligent chips and password locks with voice or face recognition functions can be called intelligent products.

Therefore, the popularization of artificial intelligence technology is not in the far future. Imagine that if every beverage bottle cap, shoes, water cup and even every pair of chopsticks has a smart chip, people's lifestyle will not change by leaps and bounds, and the environmental characteristics of the city will not change dramatically.

Keep an enterprising spirit for the distant "future science and technology" and take an applied and implemented attitude towards the development of current scientific and technological products. It is the greatest recognition of scientific and technological progress to apply the existing intelligent technology and small and micro technology and implant them into the urban residential life and environment.

4. Conclusions

The construction of "garden city" does not simply refer to the renewal and improvement of urban living environment. Taking the development of science and technology as the endogenous driving force is the fundamental of urban innovation.

In economic disciplines, the viewpoint of urban development takes industrial transformation and technological development as the main theoretical point; In the humanities and Social Sciences, the views on urban development are mainly based on population, culture and ideology; In the disciplines of architecture and urban planning and design, the theoretical starting point is spatial environment and dynamic and static analysis.

However, any viewpoint of any subject theory is only an angle of thinking. The essence of the city is human settlements. Since the social development, settlements will always exist because of human social attributes. However, the progress of science and technology will force the development of settlements to adapt more to human life. The future of the city is coming “step by step”.

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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