

Comparison of Urban Development and Management Model of USA and China

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Abstract: There are significant differences in the urban development pattern between China and United States of America (USA). Factors such as social background, history, population size and distribution all have great influence on urban development model and management of the city.

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0 Introduction

When it comes to big cities in the United States, people generally associate cities with the bustling scenes of skyscrapers in downtown New York or San Francisco. Those who have been to United States often find that the real American city scene is far from the science fiction movie, even the second line cities in the United States are not as well as the Chinese country. Indeed, with 40 years of reformation, the urban construction in China has been changing rapidly, while most of the cities in the United States remain in 80s settings. So that some people often have a claim that “the United States is a super rural area”. As a leading modern developed country, what has driven such a huge gap in urban construction between China and the United States?

The significant social and historical background differences are projected in the mode of urban development between China and the United States. The cities in USA mostly adopt group type and cluster mode, which is to expand residential areas indefinitely with a downtown (downtown business district), and Chinese cities often take old town as basis and radiate

a number of satellite cities to form a multi-center mode in both old and new urban areas. Different urban development models adopted also directly lead to differences in the urban landscape between China and the United States.

1 USA: Major cities urban planning

In USA, high rise buildings are mainly concentrated at the specific area of downtown. But, further away from downtown, rows of apartment or houses can be seen which is not more than 3 floors. The size of the downtown in USA are determined by the location and area of the city. In the middle and small cities of the United States such as Buffalo and Cleveland, it is generally made up of interlaced road networks. The business activities of the local people stretch along the sides of the downtown street. The historical blocks are located at the center of the street, while several or even dozens of high-rise office buildings are concentrated in the downtown business area. Cultural facilities and physical centers are built to fulfill entertainment demands of local residents. Big supermarkets like Walmart, Safeway are distributed along the main crossroads. In the big cities of USA such as Chicago and New York, the scale of downtown is not limited to simple road networks since commercial activities are becoming more diverse (entertainment, catering, offices, sightseeing combined). Furthermore, the scale and height of the high-rise buildings in first line metropolis city generally lead more significant gap compared with the two or three line cities. At the same time, USA downtown is the core and most concentrated zone of a city's commercial activities. It is not difficult for people who have ever travelled to major cities in the United States to find that across

the most bustling downtown, the average height of the buildings are reduced sharply, and the commercial sites were distributed within sporadic spots^[1]. Taking the Phoenix City of the sixth largest city in the United States as an example, a north-south trunk road crosses downtown and sets up a row of commercial office buildings on both sides; Moving to the periphery of the downtown, you can find multi-storey apartments and large one - family house districts are distributed in fragments; Walking in the outer rings, as the density of the population decreased rapidly, small number of sporadic single storey residential areas can be seen.

2 China: Major cities urban planning

In major cities of China,, commercial activities and office areas are often centered to specific areas. In this twenty-first century, with the rapid progress of Chinese urbanization development and increasing urban population, the size of the Chinese cities and towns has also progressed. As more and more rural population moving into the city, the unused old urban facilities and the deterioration of the living conditions fails to meet the needs of the social development in the new era. In order to overcome the neglected urban development, large and middle cities of China adopt multi-center development model as main strategy. Under this strategy, new urban areas are developed to disperse the functions of the old city center, relocate few operations and centers to the new area, and then form a multi-center metropolis. For instance, Guangzhou, as an old commercial centers, urban constructions and land of Yuexiu and Liwan District are basically saturated. Refurbished buildings and excavate ancient city cultures have become the most important part of old city's protection and transformation. Whereas Tianhe District is the newest commercial center of Guangzhou, which is famous for the Pearl River New Town, the software science park and others as well. The development of these series of new projects has become new growth points of Guangzhou's economic development. Improving current lifestyle of old urban areas, intense development of new urban areas and building satellite cities have become main guiding principles of Chinese urban developments in the past 20 years. Unlike American cities, the distribution of urban functional areas in China is more flexible and free. Residential areas and business districts are often interlaced rather than distinct^[2].

3 Diversity in urban living

A huge difference in population distribution is a major factor causing the diversity in urban functional areas. In the United States of a big city center, there will be difference between daytime and night. At the same time, the difference in the crowd of the city will be subtle setting from daytime to evening. In the daytime, the crowd in the city consists of professionals, and people flow in and out of commercial office buildings. Commercial streets in downtown are often busy during daytime. At this time, downtown is the commercial operation center. At night, the office building is empty. We can often see a few pedestrians walking on the streets. Groups of tramps go together in dark, which makes it unsafe when walking alone during night. At that time, the center of the city became a refuge for tramps. Contrary to the city center, residential areas in the suburb are empty during the day, whereas the lights turn it bright in the evening. It is obvious that the division of functional areas in American cities is guided by the flow of people. According to different groups, services provided by each functional areas will change. In big cities of China, large commercial areas crowded with high flow of pedestrians during night time. Residential areas are connected to large commercial center so that local residents can reach within walking distances, which further integrate commercial centers and residential areas. In addition, unlike most Americans living in single - family house and low - floor apartment, Chinese city residents are living in multi-level or high - level apartments. Community awareness is higher among Chinese compared with USA populations, On general, community activities among Chinese are more rich and diverse.

4 Population distribution and urbanization

Without enough population support, the city expansion plan is difficult to implement. Furthermore, a blind expansion can even create "empty city" or "ghost city" which is characterized by oversupply of real estate. The scales of city is also adjusted due to huge differences between China and the United States. In the United States, "the world's largest financial center" New York metropolitan area has the largest population scale in the whole United States, with total population of only about 8 millions. In New York, largest populations are distributed in the Manhattan Island, Brook forest and Queens, whereas other districts

are sparsely populated. But when it comes to ordinary two or three line cities such as Kansas City, generally speaking, the total population of the city will not exceed 2 million, and the size of the population in most cities is only equal to the country level in the eastern China. In terms of population scale, currently there are over 11 metropolis city in China with over 10 million permanent resident(the total population in Chongqing in western China has reached 33 million, which ranks top in population list). With continuous suburb people moving into metropolis, this number will continue to increase. However, in most parts of the United States, the population is scarcely distributed and it is hard for the population to form a huge group scale, which restricts further expansion of the size of the city. Thus, most American urban areas remain at the same level of the last century. In the future, there will be a larger influx of rural population into cities in China mainland. Large migration of population will provide a continuous impetus for the expansion of big cities.

4.1 Infrastructure development

Furthermore, the density and distribution of population have a significant impact on the distribution of urban transport infrastructure. In those areas where the population is more concentrated and the density is larger, the construction of the public transport network will be more complete than those dispersed area, which can be reflected in the comparison of the construction of public transport facilities between China and the United States. In the United States, except for some metropolis like New York City and San Francisco which are equipped with well-developed bus service and subway networks, most urban residents choose private cars as first means of transportation in their daily life. Most of the American residents are living far apart from their office spaces because the distributions of different residential areas are very scattered and generally cover a wide range, which directly increases the cost of constructing public transport construction to connect different sparse residential spots. At the same time, The highway constructions in the United States started earlyier and it has developed into a complete line network. In a long period, highway has been playing an irreplaceable pivotal role in connecting different scattered residential areas. Society with well-developed highway facility contrast to the poor public transportation, private cars inevitably become a necessary means of transport for American families

rather than relying on public transport. In China, especially in densely populated Middle East Vast Areas, the large flow of population between south and north are increasingly active. Considering relatively higher petrol fees for vehicles and convenient public transport systems, public transportation such as railway naturally become the first choice for most workers. Since Chinese cities are higher compared to USA in terms of average quantity and density, traffic links between different regions and cities will be more frequent than USA. Now, with an improvement of the high-speed railway network, a new type of high-speed train is gradually replacing traditional low-speed green leather trains. Nowadays, high-speed train is becoming the first choice for short journey. In terms of the use of private cars, the dependence of residents on private cars is not as high as that of in the big cities of USA. Compared to the United States, urban residents in China have more transportation choices rather than relying solely on private cars^[3].

5 Significant planning

The differences between China and the United States are not only reflected in the scale and population, but also in the concept of urban planning and development. This is an essential difference between the cities of the United States and the other cities of the same rank in the world. For instance, Atlanta city is the second line in the United States. Through urban satellite maps, it is not difficult to find that several broad national highways (called Interstate in the United States) cross straight through downtown in the center of the city, and even cut the original complete urban functional belts into split shapes. This rapid insertion of expressways into the urban area is common in other two or three tier cities in the United States, such as Memphis and Minneapolis. This is a typical American urban planning style, which takes highway as main axis of the urban traffic, ignores other functions of the city center and separates the complete urban land use into incomplete and fragmentary blocks. On the contrary to the urban planning policy of the United States, urban high-speed expressway in China is mainly constructed around the city. That is to say, on the premise of not destroying the integrity of the urban functional area, the expressway is mostly connected by the rapid contact channel to city. In the long-term exploration of building a metropolitan area, Chinese large cities such as Beijing and Chengdu, have been actively encouraging

the construction of the outer ring expressway. This ring road system construction will not only keep the integrity of the main functional areas in urban area, but also effectively strengthen the internal and external relations between cities. In addition, the fast track of the vehicles in the Chinese large cities are mainly consisting of elevated roads parallel to the urban roads, especially in Guangzhou. The construction of multi-storey three-dimensional traffic does not only alleviates the traffic pressure, but also effectively guarantees the underground urban road run smoothly without any obstacles. In the two or three - line city of the United States, the city's highway generally is not a viaduct. Instead, it is built directly on the ground and uses a separate flat highway instead. From the urban planning of Atlanta, we can find that expressway is the backbone of the urban area while slow speed roads as connection points cannot be parallel to the expressway. This is very bad for pedestrians and other slow speed vehicles to travel freely and flexibly between different road networks^[4].

The mandatory parking requirement is another strange phenomenon in urban planning in the United States. Coming to the center of these small cities in the United States, it is not difficult to find that the distance between buildings is much farther than that in the same grade cities in China, whereas the wide spacing is closely related to the extensive construction of parking spaces. In most of two or three - line cities in the United States, the parking lot of each building covers more than the building itself. We can even see nearly one third of the urban land is used to build parking lots in the center of a large city despite of inadequacy of land. American statistics have pointed out that each private car is even equipped with 8 parking spaces on average. The whole scale of parking spaces in the United States is equivalent to the size of 41st state in the United States. The unbalanced distribution of parking spaces between interior and exterior downtown is one of the major fall of the parking system in the United States. The city center office buildings in the major cities generally have closed parking lots, and these expensive parking lots are mostly limited to the usage of white-collar workers. But outside downtown, a large number of expansions have led to a large number of parking spaces unused and distances between buildings lengthened, which has also contributed to the spread of the city. In contrast to the large expansion of parking spaces in American cities, Chinese cities are more constrained by limited

urban lands and oversized population, which in return limit the expansion of parking lots. In recent years, a wide use of large rooftop parking lots has greatly alleviated the problem of parking in cities. In many large commercial complex projects, in order to save lands, developers often construct more underground layers for parking lots below commercial streets. In many large cities, a creative use of vertical parking lot with high utilization rates help promote a centralized utilization of land resources. The stereoscopic intensive use of Chinese parking lot is in sharp contrast to the unlimited expansion of American parking lot, which is closely related to different population scale between two countries^[5].

In addition to different urban planning concepts, Chinese visitors also complained about a huge difference in the construction of urban facilities between China and the United States in recent years. America's airports are obviously obsolete, and narrow compared to airports in Chinese large cities, while safety and frequent accidents has lowered the quality of American aviation services. There had ever been a blackout accident occurring in December 2017 at Atlanta Airport, which exerted negative influence on the travel of tens of thousands of passengers. The New York subway, built in 1863, has been plagued by noise pollution for a long period without any improvements. Besides that, terrible sanitation status and criminal cases happened in the subway make safety of New York Underground System criticized. Because of early construction, New York subway traffic signal control has not been eliminated by manual control so far, while the subway error and frequent outage events make New York metro traffic system not match the status of world's largest financial center. Although Chinese subway started late, the modern facilities equipped with comfortable air conditioning and almost 100% of the punctuality rate enable passengers to enjoy taking subway, which is in contrast to the messy and dirty New York subway. Data has shown that about one third of total 6 million 587 thousand km roads in the United States are in bad conditions, and about 14 thousand of the 83 thousand dams have "potentially high risk" (16.87%). This series of potential infrastructural safety concerns are not only closely related to the long history of construction, but also inseparable from the late renovation and maintenance work. In contrast to China, the road traffic network construction is much more quickly. As the circular radial traffic network in large cities spreads, the

refurbishment and maintenance of old roads have never fallen. The huge gap in infrastructure between China and the United States is greatly influenced by the social system as well as government policies of the country^[6].

6 Social development

In terms of social system, there are great differences between China and the United States. This significant different system has profoundly affected progress of urban development in both countries. Whether a new plan can be implemented smoothly or unimpeded are not only depending on the financial support of the decision-makers but also influenced by resistance of local citizens. In the United States, as democratic political freedom prevails, people often enjoy the right to know and participate in a very high level of decision-making, and people may even spontaneously organize parades to protest the implementation of a new scheme. On the contrary, decision-making government units generally have no supremacy of power to carry out a new plan, which directly lead to a new plan repeatedly discussed and even stopped implementing by civil resistance. At the same time, the prevalence of capitalist private ownership has also increased the difficulty of reconstructing housing in old cities. If any private property is not authorized by the owner, developers and the government are not allowed to use it. In contrast with that, the strong strength of Chinese decision making organization and superiority of the socialist public ownership are fully displayed in the aspects of the renovation and renewal of urban construction. The implementation of the public ownership system is convenient for the expropriation of the old city reconstruction. Even faced up with “nail household”,

the powerful government administration provides a necessary guarantee for implementation of a new reform and development policy. The implementation of the socialist system is conducive to reform the government’s centralized society, which can be seen in implementing “shed reform” policy proposed by Li Keqiang (the premier of the State Council). The demolition and transformation of the shanty towns allow millions of poor residents say goodbye to “dirty and messy” Slums in few years and move into new clean residential districts instead. The reason for “shed reform” can be carried out orderly in Chinese mainland is inseparable from the support of a clean and efficient government^[3].

7 Conclusion

In short, the development pattern and direction of Chinese and American cities are not only related to the social and historical background, but also to the guidance of current government’s social policies. In future, with continuous economic development and cultural exchanges between China and the United States, the mode of urban construction and development ideas will continue to expand and collaborate.

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