Planning Events Analysis Based on Homo Urbanicus Theory——an Example of a Teaching Building in Wuhan University

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Abstract. The demolition of the NO.1 teaching building in Wuhan University was related to multiple complex contradictions of various people, matters, time and spaces. The Homo Urbanicus theory offers a new way to figure the essence of this planning event out. Science of Human Settlement provides theoretical contexts of multi-level and multiple points of view. The considering method of Homo Urbanicus theory is to extract typical templates and to seek their consensus in values. Based on the above, this paper analyses the problems of a planning event about why the NO.1 teaching building in Wuhan University was “constructed unreasonably”, why it was “demolished in dispute” and how to be “reconstructed in hope” and puts forward a new way to solve it.

1. Introduction

The key to the independence of a discipline is to establish its own independent core theory[1]. In China, the urban planning discipline faces many challenges like continuous expansion of planning content, disconnection between planning theory and practice, and the limitations of Western theories. Therefore, it is urgent to solve several problems related to “urban planning theory”.

Generally speaking, the “urban planning theory” can be divided into “urban theory” and “planning theory”[1]. The former focuses on the city itself, while the latter focuses on problem solving. The origin of “urban theory” is mainly drawn from social sciences such as political economy, sociology, geography, etc., and it’s formed, improved and developed by urban scholars through applying these disciplines to solve urban problems. “Urban theory” always emphasizes the application of these social disciplines in urban problems and the mechanisms of urban issues, but it generally doesn’t promote specific solutions. While “Planning Theory” not only studies the city itself, but also focuses on how to solve urban problems by using planning methods, hoping to guide the specific planning programs. Although “urban theory” and “planning theory” have different focuses, they cannot be completely separated from each other. Because if so, the urban planning will be separated out from its working background—the specific city, and the working object of urban planning will be lost[2].

The 21st century has been called “China City’s Century”. In recent years, Chinese urbanization rate continues to grow rapidly. However, along with the advancements are more and more problems that gradually exposes to China’s cities. Among them, the most obvious one is the contradiction between the rapid growth of the needs of human living and the restraint of limited construction spaces. This contradiction brings tremendous pressure on urban space and restricts the sustainable development of the cities[3].

Wu Zhiqiang believes that the essence of “planning theory” is the sum of the presetting targets on temporal dimension and the law of process guidance under some certain social and economic conditions. The core is what role can be played by planning theory (what can we do), which way and
what mechanism can be taken to achieve the preset goal (how to do)\cite{2}\cite{4}. On the basis of describing and explaining the current urban phenomenon, urban planning theory should deal with the contradictions in the process of urban development and guide the urban development scientifically and reasonably.

2. A brief review of planning theories

The evolution progress of planning theories can be classified according to many ways. The theoretical rheology of western urban planning can be roughly summarized into four periods: pre-modern planning theory period, modern planning theory period, modern planning theory revision period and post-modern planning theory period\cite{4}.

The first period begins in the late 19th and early 20th centuries, and at that time the true theory of urban planning hasn’t formed yet. Representatives of this period are some ideal urban models, such as Garden City, Broadacre City, Linear City, Industrial City and so on. The proponents of such ideal models, such as Howard, often combine ideas with examples of simulations. These ideal models always include both values and implementations\cite{5}\cite{6}.

The second period begins in the late 1930s, when urban planners take “planning for people” as their responsibility. Planners still are the protagonist of the preparation of planning, and they think planning must be based on scientific and rationality, such as Mannheim’s “theory of rational social improvement”. The planning theories of this period are called the “first generation” theories, and they are relatively abstract, resulting in a disconnection from the specific planning scheme.

The third period focuses on the pluralistic critique of rationality and abstract theories, emphasizing the participation and ownership of people in urban planning, with diversity as the main feature. Although planners still do the planning, the planning content is determined by the residents rather than urban planners. During this period, the most representative works such as J. Jacobs’ *The Death and Life of Great American Cities* focus on criticism of rational models and concerns about urban diversity and complexity\cite{7}. From the spatial criticize perspective, D. Harvey, Lefebvre, M. Castells and other researchers judge metering theories and rational theories, and emphasis on paying more attention to political, economic and social factors in space shaping progress\cite{8}\cite{9}\cite{10}.

The post-modern planning theory school recognizes the universality of pluralism and contradictions and believes that urban planners should “de-construct” the objective world rather than integrate it superficially. Post-modern planning theories emphasis on “planning by people”, instead of professional planners and technical workers taking all the rights to do the planning. The role of the planner should be the organizer of the communication, the coordinator of the consensus, and the facilitator of communication.

Western urban planning is at the forefront theoretically and a lot of far-reaching theories has been created. However, these theories still have many defects. Hok-lin Leung points out that those early “urban planning theories” are mostly based on the yearn for a good and beautiful future and proposed the method of pursuing this idea\cite{11}. These theories deal with planning issues often by seeking to change the existing socio-economic systems. Howard’s theory of Garden City is a representative one. Although the Garden City is a concrete space came up by him and seems can be fulfilled, it is the social reform that is the essence of the theory. In fact, if the social system of the British is not changed at that time, the true idea of the Garden City will be very hardly to achieve\cite{6}\cite{12}. To pursue the highest efficiency and the best interests, the modern planning theory period often ignores the social morality and human values and neglects the decision-making justice that is very necessary to achieve social justice. Represented by the “Radiant City” of Le Corbusier, regionalism planning theory is the typical representative one of them.

As a part of the social division of labor, urban planning is responsible for dealing with issues related to urban space, which is the core task of urban planning as a discipline. Urban planning is also concerned about the economic, social and political aspects, but only reflected in the allocation and usage of space, can these concerns be linked with the work of planners\cite{11}. But the essence of the city is a space in which people settle down together. People choose the space that suits them well and carry
out various activities in this space. If we ignore the people and their activities in a city, the urban planning outcomes will be just patterns of planes and pictures of facade. They may be good-looking or bad-looking, but they are all just forcing people to enter some rigid frames, and people have to adapt themselves to the space instead of space adapting to people\cite{11}. Therefore, avoiding excessive attention to space only and dealing with and solving people’s problems in city through the allocation and usage of space is the right direction that planning theory and planning practitioners should work hard on.

3. Homo Urbanicus theory

In summary, the core task of urban planning is to create a good living environment for human. In 1950s, C.A. Doxiadis, a Greek urban planner and architecture, put forward the theory of Ekistics, which means “Human Residence”. He describes human residence as a spatial phenomenon, which consists of five groups of elements like nature, human, society, shell and network\cite{13}. He believes that people will use the core principle called “optimizing contact opportunities” to shape their living space. “Optimizing contact opportunities” means pursuing the greatest contact opportunities with minimum strength and no less than a certain quality of life and environment. Therefore, starting from the spatial aspect, the theory of human residence comprehensively considers “human” and “residence” together, which facilitates the implementation and development of urban planning work.

On the basis of “Human Residence”, Wu Liangyong puts forward the theory of “Science of Human Settlements”, placing human at the core position of the complex system of human residence and exploring the relationship between human and their living environment in an all-round and multi-system manner. Architecture, landscape and urban planning are all integrated to understand and master the objective laws of the occurrence and development of human residence and to create a better living environment\cite{14}.

Hok-lin Leung was inspired by both the western “Economic Man” and “Human Residence” to propose the theory of “Homo Urbanicus”. He believes that “Homo Urbanicus” are “people who rationally choose to live together to pursue opportunities for spatial contact”\cite{11}\cite{17}. The rationality of an “economic man” is simply self-interest, while the rationality of an “Homo Urbanicus” leads him to pursue the balance between “self-preservation” and “living-with-others” \cite{11}\cite{17}. To describe this kind of rationality, Hok-lin Leung introduces Aristotle and Aquinas’ “law of nature” as the philosophical basis\cite{15}. The idea of “settlement for pursuit of spatial contact opportunities” comes from the inspiration of human residence. The reason why people settle together in cities is to pursue more opportunities for spatial contact. In the pursuit of spatial contact opportunities, the distance between people should be neither too close nor too far away. If it is too close to each other, it will cause people’s anxiety and discomfort; meanwhile, if it is too far away, it will increase the strength and other costs to get the opportunities. Thence, we should keep it “appropriate” and seek an appropriate balance.

![Figure 1. A brief framework of “Homo Urbanicus” theory](image)

Unlike early urban planning theories that often trying to change the existing socioeconomic systems, the “Homo Urbanicus” theory reveals that the role of planners is to match “human” and
“settlements” without changing the existing political system, economic model or social structure. In reality, there are too many kinds of “human” and “settlements”. Therefore, it is most important to abstract them and to select the typical ones. The typical templates include both archetypical “Homo urbanicus” and archetypical human settlements [11]. The archetypical “Homo urbanicus” is a group of people who settle together by pursuing similar or identical spatial contact opportunities. Because a certain kind of archetypical “Homo urbanicus” pursues a certain kind of spatial contact opportunity, and a certain kind of “archetypical human settlement” provides such a kind of contact opportunity. Therefore, if a certain kind of archetypical “Homo urbanicus” can actively choose the “archetypical human settlements” that meets his needs, or if the urban planners shape a “archetypical human settlements” and provide it to this archetypical “Homo urbanicus”, most people in the city can have an ideal settlement to settle in.

Different from the traditional interpretative and guiding theory, the “Homo Urbanicus” theory is a typical “planning theory”. It includes four parts: description, interpretation, evaluation and design, running throughout the whole process of urban planning and design from the status quo analysis to the scheme design. The biggest breakthrough is the solution to “seeking rational consensus” between different people. Under the guidance of the rational thought of “self-preservation and living-with-others”, people can make their best choice. Therefore, it can be believed that the “Homo Urbanicus” theory can be used as the basis for explaining and guiding the actual case of urban planning and design.

4. The “1st Building” event in Wuhan University from Homo Urbanicus theory’s perspective

The construction of the No. 1 Teaching Building of the Faculty of Engineering of Wuhan University (hereinafter referred to as “1st Building”) is an exact reflection of the contradiction between the rapid growth of human settlements and the constraints of limited construction spaces. In 1997, due to insufficient official spaces, Wuhan University of Hydraulic and Electric Engineering began to design and construct the 1st Building. The building was designed by Academician He Jing-tang. The initial scheme was 10 floors and later changed to 18 floors. In 2000, Wuhan University of Hydraulic and Electric Engineering was merged into Wuhan University. The 1st Building became the main teaching building of the Faculty of Engineering ever since. The building had won the Chu-tian Cup award from Hubei Province, the third prize for Outstanding Construction of the Ministry of Construction, and the Lu-ban Award, the highest honor for construction quality in China. However, before the construction was completed, some people criticized that it was too “out-standing” over the surroundings and would be a tombstone that “leads to the destruction of the beautiful environment of Luojia mountain”[16]. Backtracking to the original design, it can be seen that: at macro scale, the building had destroyed the harmonious order of the overall environment of the East Lake Scenic Area; at the middle scale it had been so overemphasized that it damaged the campus structure and environment; and at the micro scale, it caused the repressive impression at the entrance, affecting the spatial quality[16]. Later, the university had tried to transform it. One of the transformation schemes is to “open a hole” right in the middle floors of the giant building, which also reflects the designer’s ambivalence for damaging the overall surrounding environment. However, in the case where the building’s height and volume had been determined, the “opening a hole” scheme was actually meaningless.

In the early morning of September 10, 2016, the 1st Building was demolished and turned into a pile of rubble. This event quickly caused a heat discussion. Many people thought that the 1st Building was built merely more than ten years ago and cost a lot of human and material resources, which was a great pity being dismantled without getting its normal service life. For this event, the official explanation was that: the demolition is for the sake of improving the overall landscape and ecology quality of East Lake Scenic Area, and it’s beneficial for creating national 5A scenery sites; this demolishing action follows the demands of protecting the contours of the landscape, historical buildings and sky line according to “Wuhan East Lake Scenic Area Master Plan (2011-2025)”. However, there were still many people who questioned the explanation: the building began to construct in the late 1990s, why didn’t it consider the problems of inconsistency with the surrounding environment, obstructing other
buildings and landscape sights at that time? And where are the funds from for re-constructing a new teaching building after the building was demolished?

After investigating this event from the perspective of “Homo Urbanicus” theory, it can be seen that the removal of the 1st Building reflects the process of archetypical “Homo urbanicus” changes. For example, Wuhan University itself has its own demands in the demolishing and reconstructing progress. On the one hand, demolition and reconstruction can be supported and helped by government funds. The rebuilt building can provide more reasonable and comfortable studying and official spaces for students and teachers. In this process, the archetypical “Homo urbanicus” are the students, teachers and school facilities in Wuhan University who pursue for better education facilities. On the other hand, due to the exchange of interests, the university can obtain development licenses for some undevelopable areas from the government’s planning department. Taking the School of Urban Design as an example, the original official space in the 1st Building was demolished, which in turn will cause an investment increase for the new campus of the School of Urban Design. And that is beneficial to the development of the school itself. And in this progress, the archetypical “Homo urbanicus” are the schools that pursue their own rights during the process of demolition and reconstruction within Wuhan University.

In essence, in the campus as a certain kind of “archetypical human settlement”, students who need study space, teachers who need official space and the university itself have always been the main representatives of the archetypical “Homo urbanicus”. However, since this demolition event, the situation has been changed due to the government’s participation. Through investing the new building’s construction, the government hopes to obtain the authority to open Wuhan University to the whole city. This will help not only to achieve the goal of coordinating the landscape around the East Lake, creating a national 5A scenery sites in the short term, but also to break down the barriers of colleges and universities and promote the rapid development of the city. To some extent, the government’s decision represents the demands of all citizens in Wuhan. Therefore, a new kind of archetypical “Homo urbanicus” has emerged, that is, the citizens and tourists who appreciate the overall scenery of the lakes and mountains in the East Lake Scenic Area. However, it should be noticed that such so-called new kind of archetypical “Homo urbanicus” has always existed, but their pursuit for opportunities of spatial contact wasn’t taken into account in the design and construction progress of the late 1st Building.

5. An outlook for the new teaching building

So far, a new practical path for planning work is provided by the “Homo Urbanicus” theory. That is, by investigating and analyzing different spatial contact opportunities, we can find the balance between “self-existence” and “living-with-others” of archetypical “Homo urbanicus” in archetypical human settlements. With the help of this balance, the urban space allocation and usage aiming to improve the suitability between archetypical human settlements and archetypical “Homo urbanicus” can be guided.
Figure 2. Practical scheme of “Homo Urbanicus” theory

The “Homo Urbanicus” theory’s values must be implemented in the practical scheme implementation process. Hok-lin Leung points out that the mission of “Homo Urbanicus” theory is to match settlements with human’s pursuit based on human nature. And settlements should be able to provide enough spatial contact opportunities for human[17]. Under the premise of “self-existence” and “living-with-others”, the ethics of this mission is to enhance the spatial contact opportunities for individuals and groups to achieve their highest happiness by regulating the behavior of individuals and ensuring individuals’ interests. Therefore, the value of the “Homo Urbanicus” theory is human-oriented.

The key research method of “Homo Urbanicus” theory lies in social surveys. Under the current situation that the 1st Building had been dismantled, the task of urban planner is to investigate and analyze what kind of spatial contact opportunities can be created in the available space after dismantling. The uniqueness of the “Homo Urbanicus” theory is to achieve a common understanding among different kinds of archetypical “Homo urbanicus”, to seek the broadest range of consensus, and then to carry out archetypical human settlements allocation and planning advice. There are two purposes of the investigation. The first is to figure out the different kinds of archetypical “Homo urbanicus” at different scales of space like the micro scale (Faculty of Engineering), middle scale (Wuhan University), macro scale (the whole East Lake Scenic Area) and all the other ranges of spaces; the second is to select the “typical templates” according to the attributions of different people, matters,
time, and space. That is to identify a certain group of people (people) who are pursuing some certain spatial contact opportunities (matters) in this specific educational place (spaces) during the demolishing and reconstructing progress (time).

Different archetypical “Homo urbanicus” have different expectations: students need more high-quality studying space; teachers want more efficient official space; tourists and citizens hope to enjoy a more harmonious landscape. These are subjective needs. Meanwhile, different archetypical human settlements offer different spatial contact opportunities. For example, a shorter teaching building provides a harmonious viewing experience, while a tall one provides sufficient studying and working space. These are objective facts. There is a certain gap between subjective needs and objective facts. The planning objective facts should not be forced to accommodate to subjective needs, because it is not efficient; nor should the subjective needs be forced to accommodate to objective facts, because it is not fair[11], so it is necessary to find a balance between the two. The construction of a high building is unfair to tourists and citizens, and the old building demolition is not efficient to students, teachers and university. But now that the demolition of the old building has become a reality, the objective facts have got the possibility of accommodating to subjective needs, so there is an opportunity to rematch both sides.

According to “Homo Urbanicus” theory, the construction guidelines - “applicability, economy and aesthetics”, which is advocated by traditional architectural design, need to be adjusted. “Applicability” no longer parochially means “enough construction area” but should be measured from the human-oriented values. So, it has very important significance to clarify different stakeholders in the planning process. The main body of interest is archetypical “Homo urbanicus”. From a macro scale point of view, in this event it is clear that the object is no longer limited to students and teachers, and that Wuhan University should also be on behalf of the style of Wuhan. Therefore, the evaluation of the architectural style in Wuhan University by outsiders should be an important indicator of design. The establishment of this evaluation standard relies on the relationship between the building and the surrounding. Under this premise, it can be deduced that the “aesthetics” guideline is particularly prominent in this case. It cannot just be “paying attention to aesthetics in possible conditions”, on the contrary, the coordination between building and the surrounding environment should be especially focused, emphasizing to respect and to make good use of the whole external environment.

Similarly, the determination of the second indicator is also based on the definition of archetypical “Homo urbanicus”. After satisfying the macro scale archetypical “Homo urbanicus” - tourists and city residents, the archetypical “Homo urbanicus” at the micro scale are obviously within Wuhan University, represented by university itself, administrators, teachers, students and other relevant people. Among them, some of the needs seem to be contradictory. The more representative one is the contradiction between the “functional, convenient, aesthetic” needs of students as well as teachers and the “limited construction investment” needs of the school. If the long-term development and construction of university is taken into account, more “economy” investment obviously leading to greater potential benefits. Thus, the sharp contradiction will be weakened. Therefore, this second indicator would be “economy”. It should be emphasized that the “economy” is not only the amount of funds, but also the building materials that are recyclable and low energy consumption, such as landuse-saving, water-saving, energy-saving and other construction methods. On the basis of “aesthetics” and “economy”, some more detailed requirements about “applicability” of the building can be worked out. Using reasonable architectural design techniques, fully considering the orientation and volume of the building and making the full use of underground space, the “applicability” can be realized naturally.

Therefore, the values of the new building should follow the sequence of “aesthetics” first, “economy” and “applicability” next. First, the architectural design should meet the aesthetic principle to coordinate with the overall scenery of Wuhan University and the East Lake Scenic Area. Second, the new building design should focus on the material recycling and low energy consumption to meet the economic principles and reduce the expenses as much as possible while ensuring the quality. Finally, planning and designing the building functions with a long-term perspective to meet not only
the current needs, but also the needs of the future development of Wuhan University should also be taken into consideration.

6. Conclusion
The importance of combing and discussing urban planning theories to the theoretical development and progress of urban planning discipline is self-evident. As a typical “planning theory”, the “Homo Urbanicus” theory includes every part of a planning event - description, interpretation, evaluation and design, and runs through the whole process of urban planning. It provides a new way to solve the multiple complex contradictions among different people, matters, time and spaces. Reviewing the demolition and reconstruction of the 1st Building in Wuhan University from the perspective of the “Homo Urbanicus” theory, it can be found that the new building should to be derived according to the value of “aesthetics, economy and applicability”, which is different from the traditional planning and construction guidelines.

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