

# On Sustainable and Ecological Urban Planning

## – – Mumford’s Thought on the City

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### Abstract

With the development of industrialization and urbanization, it has become more and more important to learn how to build ecological cities. This article tries to reveal Mumford’s thought on sustainable urban ecology in his books on cities in the 1920s to the 1960s and his early contribution to the ecological theory of urban planning.

**Key words:** Mumford, sustainable and ecological urban planning, contribution

### 1. Introduction

In modern academia, urban ecology is generally defined as a subject on the study of the relationship between urban human activities and their environments. Urban ecology regards the city as a human-centered artificial ecosystem. It theoretically focused on the city’s origin and development, composition and distribution, the relationship between structure and function, and mechanisms of regulation and control; and practically aims at using the ecological principles to construct and manage cities, to improve resource utilization, and to increase urban vitality.

The idea of modern urban ecology dates back to the late 19<sup>th</sup> century. Facing with the destruction of the environment by industrialization, many Western

people of insight, such as, Howard of the United Kingdom in 1898 put forward the “Garden City” theory, British biologist Patrick Geddes also published *The Evolution of Cities*, (1915) trying to use the ecological principles in urban planning and construction. R. E. Park of the Chicago School also used the theory of biomes to study urban society. Mumford, in his *The Culture of Cities* (1938), *The City in History* (1961) and other works inherited and developed the ideas of Howard and Geddes, formed relatively complete urban ecological thought, and laid the foundation for the modern urban ecology. This article intends to dig out the sustainable urban ecological thought of Lewis Mumford and reveal his early contribution to urban ecology.

### 2. Mumford’s sustainable regional planning theory

#### 2.1 Mumford’s early conception of regionalism

Even as early as in 1919, Mumford wrote an article for the *State* magazine in which he put forward a comprehensive urban solution to deal with urban housing, the issues of industry, transportation and land-use. Mumford wrote that housing problems, industrial problems, traffic problems and land-use issues cannot be isolated by the experts without considering the interests of the citizens. These is-

sues interlink and interact and can be solved effectively only when we perpetually bear in mind the overall environment which has generated them. <sup>[2]</sup> In other words, these problems can not be considered in isolation, but a variety of physical and geographical factors of the surrounding region have to be taken into account. In 1938 Mumford further explained that regionalism is an effort to recognize the existence of the real people, social patterns, and geographic relationships, which has been ignored by the abstract culture of the metropolis. Regionalism is against the aimless operation of a nomadic mode of life of modern business and attempts to establish a stable, balanced and civilized way of life.

## **2.2 Application of Mumford's regional planning theory**

Mumford not only emphasized the close relationship of the city and its surrounding region in his research on the development of the Western cities, but also adheres to this principle in real practice. Mumford, and John McCain, Stein, Wright and other well-known U.S. city planners established the Regional Planning Association of America in 1923. In 1925 Thomas Adams drafted *The Regional Plan of New York*, in which Adams advocates to emphasize the concentration of the population to build skyscrapers in and highways to New York City. Against this plan, Mumford and McCain and other members of the Regional Planning Association of America produces another report in May the same year, in which they called for the establishment of the Hudson Valley with the rail and road coordination of the overall transportation system, with strict restrictions on building height and scale of Manhattan, limiting the value of urban real estate, with government intervention and subsidies to the industry for their outward migration from the city center. In

this report, Mumford and his colleagues not only take into account the coordinated development of the New York City and the surrounding region as a whole, but also tries to control the growth of urban population and the scale of New York City to build small regional centers to fundamentally alleviate the population pressure in New York City. Their overall planning of New York City and its surrounding area and the surrounding greater region organically combines social and economic aspects of the whole region. <sup>[3]</sup> This program, if adopted, could have benefited New York City and its surrounding region from hindsight and is probably a fundamental solution to the overpopulation of New York City.

## **2.3. Mumford's thought on the city and its surrounding region**

In accordance with the present understanding of the eco-city, focus can not be put on the city itself alone, but on the combination of urban and regional environment. First eco-city is a regional city. Without the regional support system, the construction of the eco-city is impossible. The city with its surrounding suburbs and its larger surrounding areas is an inseparable open system. Cities with their surrounding regions have a wide range of material recycling, energy flow, information transfer, thus ensuring the normal operation of its various functions. <sup>[4]</sup> Mumford also discussed the city in a similar way. In his opinion, organisms in order to safeguard their own life forms, must constantly update themselves, to establish contact with the surrounding environment. Cities is the same, it must establish contact with the supporting natural environment and the socio-economic environment positively to seek a balance of supply and demand in order to maintain sustainable development. This point of view has long been discussed by him in *The Culture of Cities*. Mumford believes

that the development of the city is constrained by the natural environment of the surrounding region. Thus, he thought, establishment of urban industry should consider the surrounding soil, landscape and agriculture. In addition, the local geographical, historical and cultural factors should also be taken into account. He believes that the scale of the city should be decided on the supporting ability of the surrounding areas to maintain the sustainability of urban development in various fields of material and culture. Mumford is against the arbitrary planning of the political leaders and industrial managers for their failure to consider the dynamic balance between the city and its various parts of the region. <sup>[5]</sup>

The eco-city can not be separated from the surrounding areas in all aspects of support around the wider region and the region needs the city's guidance and support in the aspects of technology and culture. Therefore the relationship between the city and its surrounding areas is a mutual support and interdependence. Mumford has reiterated this idea many times in his books. In *The City in History*, Mumford cites the medieval European towns as an illustration. "Ecologically speaking, the city and the countryside are a single unit. If one can do without the other, it is the countryside, not the city". <sup>[6]</sup> (p.338) Mumford was particularly appreciative of the coordinated organic development of the medieval city and its rural surroundings. Mumford believes that no matter how big a "city container" is, it is impossible to seek to solve its own problems by the implementation of local self-sufficiency within its own scope. <sup>[6]</sup> Here Mumford is very negative about the independent development of the city itself.

### **3. Ecological city as a friendly livable environment**

#### **3.1 Mumford's observation of environmental destruction by industrialization**

According to current understanding, the eco-city is a composite system based upon the coordinated development of economy and society by taking as a life-line its natural environmental resources. When understanding the eco-city, we must adhere to the organic integration of the economic environment, the social environment and the ecological environment. Firstly, the eco-city should be a livable city. Mumford finds in the thirties of the last century the destruction of industrial civilization on the environment, and advocated in many of his books to establish an urban environment beneficial both to people's physical and mental health. He realized that this environmental destruction is a serious threat to the survival of mankind himself. <sup>[5]</sup> (p.171) This insight of the destructive effect of industrialization on the environment is farsighted at that time when most people hailed the progress of science and technology and ignored the destruction and pollution of the urban environment.

#### **3.2 Mumford's strategy to combat environmental destruction**

In order to change the city's ecological environment to protect people's health, it is necessary to increase the green building of the city. Mumford strongly advocates in the same book to construct natural parks and gardens. Mumford's idea to decentralize these facilities to small communities over the entire city strongly coheres with the principles of the eco-city, which advocates to construct comprehensive, multi-functional and three-dimensional urban green system so as to putting the city inside nature while also

introducing nature into the city. Mumford opposed to build metropolitans and advocated the construction of small and medium-sized cities in order to make the city better harmonize with nature.<sup>[7]</sup>

#### 4. Mumford's emphasis on communication and interaction

The eco-city is a caring environment in which interaction between people is encouraged in order to reduce the sense of loneliness and alienation. The main mode of care for the people in the city is to build communities, establish and improve the social services and the infrastructure to meet people's material and spiritual needs. Mumford in his *The Culture of Cities* repeatedly emphasized community building. Mumford spoke highly of the medieval city. Due to its small size, everyone can participate in all sorts of activities, for example, religious ceremonies. Therefore, Mumford advocates to treat communities as units, to establish a multi-centered city where a variety of municipal facilities, such as libraries, swimming pools, natural parks, green spaces can benefit the general public. Mumford suggests that urban planning should feature a number of community centers scattered over the entire city, rather than one dominant city center. Every community center, regardless of population size, should hold the same valency in the plan to become an independent unit, rather than subordinate to the large city center.<sup>[7]</sup> Mumford emphasizes the function of neighborhoods, community centers, playgrounds, parks for people in fulfilling their civic democratic life, in nurturing their mutual assistance, mutual respect and friendship, in cultivating their sense of cooperation and belonging.<sup>[8]</sup>

## 5. Conclusion

In summery, we can see that most of the ideas and principles of the modern urban ecology have long been put forward, explained and discussed by Mumford in the 1930s to the 1960s. Although he did not explicitly use the term "urban ecology", and his strands of thought are not as mature and complete as the modern urban ecology, this does not mean that in the narrative of the history of modern urban ecology, we should forget or ignore Mumford's early contribution.

## 6. Reference

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