

The Thoughts and Comparison of Urban Renewal Strategies in Edinburgh, UK and Xi 'an, China

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Abstract. Urban renewal theory is one of the theoretical frameworks in supporting urban development, which begins with an increase in the number of buildings in the city to accommodate basic human needs, continuing with the preservation of historical landmarks, as well as the introduction of green plants and sustainable ecology. It indicates that people pay greater attention to the urban living environment and shape the quality standards for urban design and the building of the city's image. The aims of Global urban renewal are almost the same, although the techniques and tactics of urban growth and renewal in the West and East vary to some extent. To fulfill the developing demands of the times, the city needs to renovate and upgrade the city's older parts while also considering the city's overall expansion and progress. This article examines and contrasts the history, idea, and urban renewal approach in the United Kingdom and China, and also investigates the similarities and differences in the growth of western and eastern cities. The cities are selected for their long history and unique planning features. Edinburgh in the U.K. and Xi'an City in China are selected as examples for an in-depth analysis of urban planning sequences in regeneration. The study of the evolution of urban morphology and the urban regeneration strategies of British and Chinese cities is reflected in the modern urban renewal of Edinburgh and Xi'an, along with the relationship between urban morphology and urban history and culture. It also discusses the impact of green space and the ecological environment on these two cities, separately, which also offers inspiring ideas and references for future city governance and revitalization.

Key words: Urban renewal, Urban design, History and culture, Natural ecology, Sustainable development

1. Introduction

Since its origin, the city has been evolving and recreating itself similar to a changing natural living form. In the modern sense, the renewal of form, space, and architecture of specific cities also symbolizes identifying and examining urban concerns. To guide and solve the threats posed by urban gaps and to create the theoretical and practical groundwork for future city development. The modern, large-scale worldwide urban renewal movement emerged in the West in the twentieth century, owing to societal tensions caused by religious, ethnic, and other forces. Its aim is to minimize the slums in cities, enhance people's living circumstances, and improve urban planning, among other things [1]. The U.K., the first industrialized country in the world, has recently been more visible and adventurous in its approach to urban reconstruction and is more likely to "urban regeneration" [2]. Progressive zoning, tiny, dispersed pieces of land, and some preservations of the urban environment are examples of architectural and urban pattern changes. China, a latecomer to contemporary urban development, has advanced more slowly yet significantly, favoring the "urban agglomeration" of people and production [3]. However, the natural environment of the region is under relatively high strain due to urbanization. Even though urban regeneration in the United Kingdom and China occurred in separate eras and with various techniques and models, they might derive their implications from one another. Urban renewal is not only simply the gradual development of the city's physical environment but also the general strengthening of society and the economy. In the present study, urban renewal is critically examined. It also considers how these occurrences influence how urban green areas and natural ecosystems are being renewed. Examine the benefits and distinctions between urban regeneration and iteration in the UK and China using the ancient cities of Edinburgh and Xi'an as examples and investigate the change in the urban regeneration process and methodologies at various phases of the

cities. Systematic and integrated urban renewal thought is increasingly shifting from a single-objective environmental regeneration to a richly layered and extensive planning concept of integrated sustainable regeneration.

2. Background Study on Urban Renewal

2.1. Urban renewal based on urban historic and cultural preservation

A city is the most acceptable source of information on the cultural development of the whole city or even an entire country since it is a social organism that contains historical relics. A rich architectural environment and innovative urban planning and design concepts will be left behind by urban renewal [4]. Therefore, the ability to re-examine the continuity of human cultural transmission is essential to studying urban evolution, exploring ways that aging cities might be revitalized while considering the city's original historical and cultural resources. Indeed, it is crucial for preserving a strong bond between people, architecture, urban design, and cultural surroundings and for the city's sustainable ecological symbiotic growth. An examination of physical environmental space revitalizes British and Chinese cities. A study of design approaches while updating and conserving Western and Eastern social humanities. Furthermore, analyzing various urban growth phenomena will aid the healthy and orderly regeneration and development of the city.

Throughout history, the center of a city has served as the hub of activity for the whole neighborhood. The center region was also developed early in the city's history. To manufacture and trade products, people gathered. However, the historical center of the city is due to the economic and technological shortcomings of the past. There are generally some problems such as inadequate infrastructure, functional disorder, illogical design, ecological breakdowns, and traffic congestion. The vitality of the city progressively declines as the population grows, which means that the urban buildings of the ancient city are continually renewing and expanding outwards based on housing, commerce, and production.

Three components accompany urban regeneration: Conservation, Rehabilitation, and Redevelopment as it declines while growing and developing [5]. Conservation is preserving the current form and pattern of a metropolitan area without additional changes. Rehabilitation means reasonably using the historic environment and regulating it without demolishing or destroying it. The goal of redevelopment is to create new space and content in the city to improve the quality of the environment. In the current culture, a city's expansion and regeneration may appear to be geared toward enhancing the city's physical circumstances.

However, solving underlying urban problems requires more than just adding new buildings and amenities; it also requires balancing its environment's physical and intangible aspects. This means that urban renewal depends on preserving history and culture. The distinctive urban shape and social network of both British and Chinese cities are historical precipitation in the town through different times, as can be observed from the historical and cultural features of the city. This leads to regionally oriented urban planning. Although modern cities are becoming increasingly similar in terms of urban planning, architectural styles, and even the way people live in them. This does not imply that the histories and cultures of the two cities will coincide. Despite being a historical city, it nevertheless retains a unique personality in planning and architecture, which implies that the spatial form of urban planning and architecture determines how culture and history are expressed externally. It highlights the sense of local place and identity and promotes a sense of belonging among citizens [6]. Therefore, it is based on the preserving spatial continuity that the city's historical narrative may be sustained and its character developed in urban regeneration and repetition in both the West and the East. It is also one of the most effective common denominators for integrating individual urban spaces to revitalize ancient and new cities.

2.2. Urban regeneration based on the natural ecology of the city

Organic urban life forms require natural ecological areas to balance the urban environment. The natural environmental aspect of urban renewal concentrates on the surroundings of various buildings, streets, parks, green spaces, and distressed communities. It is hoped to improve the spatial quality and urban capacity of the more run-down regions through ecological regeneration. Furthermore, the construction and restoration of natural ecology have become an essential aspect of the regeneration process under the notion of symbiosis between the city and the environment. The fostering of organic renewal of urban life forms in both Western and Eastern urban development ensures the steady and healthy growth of urban ecosystems. The entire city develops a good cycle of self-regulation, self-healing, and self-stable operation to realize the mechanism of urban nature and ecology's sustainable growth. Eco-urban planning and design will also impact the city's development pattern. As a result, it is vital to consider the city's unique qualities while designing for natural ecology in urban planning and design. Relying on ecological balance establishes a harmonious interaction between people and the city. In urban renewal, the struggle(s) between man and nature will likely deepen in line with economic development. Therefore, designers should concentrate on balancing the material and spiritual demands of cities, their inhabitants, and the ecologically responsible use of urban resources. It also indicates that a suitable living environment is created by the spatial arrangement of each type of structure and the ecological green space.

Furthermore, urban ecological planning and design should consider the overall historical and cultural aspects of the city, covering the geology, topography, and antiquity of its surroundings. Urban planning and renewal may attain the highest level of sustainable urban development by reconciling the interaction between economic growth and ecological conservation. It is important to note that the history, culture, personality, and look of a city may all be effectively expressed via landscape design, and these can also act as an air purifier by absorbing dust and other airborne contaminants. Greenery, on the other hand, cannot be planted randomly, and needs are zoned accordingly. Only by creating a continuous green space protection zone across the city can wasteful pollution during urban renewal and construction be avoided. The city may be safeguarded as a barrier. It is necessary to consider ecological balance among the city's social, economic, and environmental subsystems, with ecology playing a significant part in Western and Eastern urban design. The creation of the ideal ecologically healthy city should be founded on the ecosystem's evolutionary rules. The urban environment has a steady and flowing condition of matter and information. The opposition to urban regeneration will decrease as a result [7].

3. An examination of Edinburgh in relation to history in the U.K.

Based on the experience of urban regeneration in Western countries, there are three primary approaches to urban renewal in the history of the United Kingdom as summarized below: (1) In the early stages of city construction, buildings were dismantled, rebuilt, and stretched outwards to eliminate the urban issues of the old city and create a new city-state. (2) In the 19th century, it was also the conversion or restoration of existing buildings with a specific value for preservation, which includes the replacement of functions, internal repair, and renewal of infrastructure in the old city, to convert and upgrade the processes and improve the quality of living. (3) Since the twentieth century, the city has been actively preserving its ancient areas and buildings (i.e., continuing the city's historical and cultural lineage for buildings and neighborhoods rich in historical and cultural value), making them unique and distinctive for the part of the world. Some cities have evidenced a temporary dispersion and change in output. These three renewal techniques are commonly employed in the urban regeneration movement and serve as a solid starting point for the search for innovative urban renewal strategies [8].

Edinburgh is a well-known cultural and historical city in the U.K., separated into the Old Town and the New Town. Old Town was built in the Middle Ages and is densely populated with historic forts. The New Town is a new neoclassical building district built in the north of the Old Town in the

18th century. The New Town of Edinburgh was created to transform the cityscape from its former packed and cramped state because Old Town presented a severe threat to the health of its inhabitants. The construction of New Town is also a kind of class redistribution, in that the new elite are concentrated in the New Town, while the commoners are heaped up in the Old ones. The rich are increasingly abandoning the cramped and filthy Old Town.

As a result, the New Town and Old Town are divided not just by distance but also by a physical class gap and a cultural separation. However, the Old Town of Edinburgh has been returned to its former splendor as one of the most historically Scottish streets of the city. The original buildings have been rebuilt and modernized, creating a recognized retail strip with a distinctive personality. Furthermore, there was a significant outflow from metropolitan areas in the United Kingdom during the 1960s and 1970s. Numerous historic industrial sectors have closed down, which has exacerbated unemployment and prevented the growth of new industries in such areas. The population increasingly moved to the suburbs as a result, and the urban development push spread to the city's outskirts. The United Kingdom is experiencing a surge in urban renewal. The U.K. emerged as the nation with the earliest beginning of urbanization, the most significant recognized degree of urbanization, and the enormous amount of global reverse urbanization. According to published statistics, its urbanization rate in 2019 was approximately 90% [9]. Edinburgh has also relocated a significant amount of output to the outskirts of a city, including factories, allotments, villages, farms, and other central industrial locations. Simultaneously, biological green zones are progressively forming around these places, effectively partitioning the area while maintaining the ecological balance of Edinburgh.

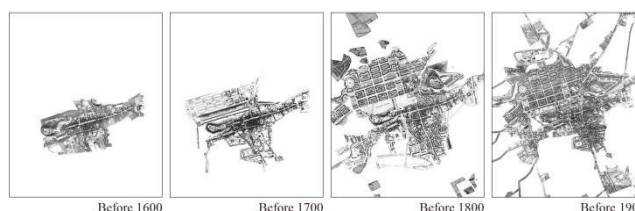


Figure 1. Edinburgh City Planning
(Picture credited: Original)

4. An examination of Xi'an's urban renewal in light of Chinese history

The historical Chinese urban plan was one of extending out to neighboring city-states, with royal palaces serving as the focal point. Urban renewal has therefore occurred in China due to the tremendous urbanization phenomena of the 20th century, which has led to new demands on the purpose and space of the city. China's modern urban growth just began in the second decade of the twenty-first century, but urbanization has accelerated significantly since the reform and opening up policy (the great revolution in China to liberate ideas, innovate theories, and forge new paths). The resident population's urbanization rate has above 60% as of 2019. At this point, China's recent decades of tremendous land development have repeatedly pushed against the ecological breaking point. In addition, several historic urban districts in China's towns and cities are in disrepair owing to a lack of dynamic care and administration. Massive management, fire, health, and safety risks frequently exist in these older urban neighborhoods. The initial goal of urban renewal in China was to release more of the land's potential and catalyze the urbanization process. Another urban organization is required to balance the paradoxes of some metropolitan zones.

With its lengthy history and heritage of the 13th dynasty, Xi'an is a world-renowned historical and cultural area. The ancient districts of the old city in Xi'an have been steadily restored and improved with the development and implementation of the "Imperial City Revival" project [10]. Xi'an has had different city centers in various dynasties. With the changing of dynasties and the tremendous urbanization phenomena that followed the reform and opening up, Xi'an established a grouped layout, and the road network has maintained the spatial features of the axis symmetry and checkerboard road network for a thousand years. At the macro level, green spaces along significant rivers and

transportation routes create an active biological system. The fundamental framework of the landscape is formed by creating a ring of greenery around the core and adding little urban squares and green areas of the city. A system of green space patches is established, suggesting "little inside and huge outside, dense inside and sparse outside." To form the ancient Chinese "pearl in a jade tray" ecological landscape layout. However, many urban villages have been changed into transitional zones under urban redevelopment in the inner and periphery parts of the various dynastic clusters. On the one hand, urban villages lack urban recognition and acceptance; on the other hand, they are challenged to integrate into Xi'an's urban culture. During the urbanization, it gradually pulls away from Xi'an's urban rejuvenation. As a result, using natural ecological development in urban renewal and restoration may become a new method of urban village transformation and rehabilitation.

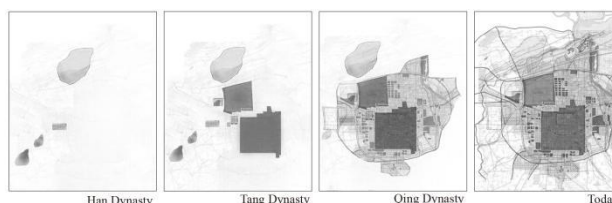


Figure 2. Xi'an City Planning
(Picture credited: Original)

5. The Comparisons of Western and Eastern Urban renewal in Summary and Lessons

The stage and level of a city's growth differ depending on the social development and cultural customs of the East and the West. However, the objective is to improve the city's standard generally. Urban renewal is more than just a physical construction method; it is also about the future direction of a city or even a country. It symbolizes a rich social history and human connotation. These show that there are multiple goals for urban revitalization based on the particular circumstances of each city rather than simply one. Especially when dealing with ancient towns with a long history, it is necessary to improve the appearance of the city and also to carry out a certain degree of renovation. What is more important is to preserve the character and traditional culture of the city. Therefore, in the future, the government of the city should be constructed in a multidimensional manner to account for different countries, varied urban characteristics, and different stages of development. And in combination with natural ecology, a thorough, transparent, and integrated model of urban functioning should be developed.

Urban renewal in both the West and the East has progressed from a straightforward regeneration of physical space to fulfill residential demands to a more complicated and comprehensive urban redevelopment. The one-sidedness of the early regeneration method will cause numerous challenges for the city's eventual development. It is essential to adopt a holistic perspective on urban renewal and monitor the trends of local urban social dynamics, economic development, and aesthetics as early as practical to study the regional expansion of cities worldwide. And in time to prevent the inconsistent updates brought on by regional fragmentation. In this process, it is also vital to focus on the daily lives of the populace, the enhancement of each area's responsibilities, and the representation of the city's character. The formation of the local regions and the construction of urban culture in each city ensure each town can have its character.

6. Conclusion

In both Western and Eastern countries, urban renewal is the guiding light for future environmental building and urban planning, and there is a need to identify common ground and learn from each other in terms of different countries' strengths and insights. Long-term urban ecological planning is a history of the rise of human civilization and the development of industrialized modernity in a nation.

It clearly represents how a historical city views architecture, nature, science, and economics. Also, it is closely related to the production and spirituality of a whole country. Therefore, urban renewal should be based on the concept of sustainable cities. In the future, it is necessary to pay more attention to the ecological planning of the city to balance natural green spaces and urban development and adopt multi-party collaboration in spatial planning. It integrates comprehensive urban renewal with sustainable development to strengthen the functioning of urban ecological planning and the responsiveness of the urban design.

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