

Chapter 6

Re–Envisioning Urban Open Spaces: An Inquiry Into Biophilic Urbanism

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ABSTRACT

Cities are expanding rapidly, and the impact of dense human-oriented urban systems on ecosystems is both direct (conversion of natural land cover to urban footprint) and indirect. Human settlements are more complex than any other ecosystems as they meet human socio-ecological needs and support local biodiversity. The open spaces of a city with rich cultural character and biodiversity have become important elements of urban design, where urban systems can be planned to coexist with local biodiversity without disturbing the ecosystem. With the need to redefine urban footprint as an ecologically rich urban environment, this chapter addresses the definition of urban open space and questions the coexistence of humans and biodiversity in urban open spaces.

INTRODUCTION

The figure-ground spatial analysis of a human settlement is expressed in terms of urban built mass and voids (urban open spaces). Open spaces have exhibited cultural and political character at different scales based on their level of accessibility (public or private) and often served recreational activities in different ways. Historically, open spaces played an important role in ancient city planning. Squares, plazas and gardens are commonly found in ancient cities for the socio-cultural, political, and recreational needs of the communities of that era. Agoras, Roman forums, Mughal Gardens, Japanese hanging gardens are some examples of open spaces in ancient settlements. Today, with multicultural and complex urban societies, a wide range of urban open spaces have evolved based on the activities they hold. With increasing urbanisation and multiculturalism in cities, urban open spaces have become more dynamic and flexible, accommodating a wide variety of activities. Considering the transformation of the urban open spaces,

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the dynamics of human interaction with nature can be designed with an efficient management of open spaces. COVID-19 has made us see our natural affinity with living systems, and urban open spaces provide us more than just well-being. Today, in a highly urbanized age, they bring people closer to nature, in terms of providing urban greenery. The history of urban green can be seen in ancient city planning. The pre-industrialization focused on building gardens for recreation and a better life, while after the industrial revolution, and increasing resource consumption and urban activities, green spaces became the lungs of a city and different movements such as the public park movement, garden city movement, etc. emphasized the importance of urban green for a healthy urban life and a better standard of living. Within this context, the biophilia hypothesis by Edward O. Wilson proposes that “human beings possess an innate tendency to seek connections with nature and other forms of life” and different studies prove that nature has better psychological and spiritual health benefits to humans (Wilson, 2003).

The pace of urbanization (urban expansion) and resource consumption are causing irreversible damage to nature, natural landscapes are largely converted into urban landscapes, resulting in less open space for both humans and local biodiversity. It is almost impossible to recreate ecology once lost, the reverse process is as slow that it is impossible, regardless of their efforts in ecological restoration. Humans are equally important to Mother Earth as many other species. Their actions to find a comfortable and easy life in nature make survival hard for other species. Expanding human settlements are slowly encroaching on local biodiversity. Urban planning and urban design must redefine user groups and design urban spaces to accommodate human and other life. The World Bank’s World Development Report in 2009 says that 95% of the World’s population lives on 10% of the Earth’s land area, while at the same time, only 10% of the Earth’s land is considered remote and untouched by humans. Humans must reconsider their actions and develop an urban habitat that supports local biodiversity.

BACKGROUND

The idea of conservation started before the industrial revolution. John Evelyn in 1664 in his work *Sylva* or a discourse on forest trees and the propagation of timber in His Majesty’s dominions (Evelyn, 1664) discusses different issues of deforestation, felling of trees for timber, and deforestation for construction in England. Although deforestation and overuse of natural resources were a major ecological problem caused by human actions in the pre-industrial era, industrialization increased the exploitation of forests, coal mines, and petroleum depositories; the modern idea of conservation addresses all environmental problems as a result of industrial revolutions such as the rate of depletion of natural resources, deforestation, poor waste management, environmental pollution, biodiversity degradation and climate change. After the industrial revolution, modern conservationism targeted environmental damage caused by human actions and demanded the need to adopt a sustainable approach to resource consumption. When considered across global regions, it can be seen that the concept of conservationism has evolved from the conservation of natural resources and biodiversity to the conservation of urban ecology. The rapid expansion of cities, which are completely human-centered and surrounding the natural landscape, negatively affects those who belong to the same environment and ecosystem. In response to his self-centered actions, urban ecologies are disrupted by environmental pollution. and loss of local biodiversity.

The Convention on Biological Diversity (CBD), a global convention for ecological conservation has three major objectives, these are the conservation of biodiversity, the sustainable use of components of biodiversity, and the equitable sharing of genetic resources. The strategic plan for biodiversity from

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