

Enhancing Biocultural Diversity of Wild Urban Woodland

Subjects: Biodiversity Conservation

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In the vortex of the environmental and ecological crises, it is clear that the cosmopolitan way of living is facing uncertainty with no easing in sight. Looking beyond the horizon at what the aftermath will yield, it is quite clear that the meaning of urbanity has to be transformed; the urban life has to support social and ecological well-being, and the city has to intertwine more closely with nature. Therefore, wild urban woodlands (WUWs), often morphologically exclusive, culturally contradictory, and biologically heterogeneous, are recognized together with the other informal wilderness of the city as catalyzers of a newly constructed identity and the first line of defense when the question of the socio-ecological resilience of the city is raised.

Keywords: wild urban woodland ; biocultural diversity ; adventure-based methodology ; architecture and nature

1. Introduction

The contemporary European society agenda has been built upon the notion of globalization and the fostering of the borderless flow of people, goods, money, and information. In line with EU 2030 strategy ^[1], apart from evolving through the harmonization of the ecological and technological paradigm of the smart society, the social initiatives of a collaborative and open city returning to its citizens have become one of the priorities of the development of the city and society as a whole. More than ever before, in the midst of the different environmental and ecological crises the city is faced with, the process of Europeanization is colored by the new standards of eco-social well-being. It has revealed how fragile we are and the fact that, once again, we have to look deep inside ourselves, to recuperate from the inside, to resonate individual and community responsibility towards the city; to nurture the place locally is to survive globally. Instead of seeing the current crisis as a battle, perhaps a better way is to consider how to evolve to meet the reality of a far more vulnerable city and society. Open spaces that nurture natural characteristics, and especially wild urban woodland (WUW), are foreseen as significant carriers of the quality of the city; on one side they are its lungs, and on the other, they are the promoters of its urbanity and identity. The circumstances of reduced mobility on all levels and the reduced concentration of capital actualize the connection between nature and man. Therefore, strategies for the development of urban forests go beyond mere protection and enter the domain of everyday life and urban lifestyle. The encounter with nature has a therapeutic significance and its proximity and presence become a physical and mental health priority. In questioning how and if we have to provide accessibility along with protection for WUW, the discipline of architecture cannot and must not give up the search for new environmentally friendly solutions which will improve WUW in the direction of meeting ecological and social conditions and providing benefits for all the participants in the life of the city equally.

Therefore, in the domain of architecture and urbanism, the focus of the planning and design practices is shifting from quantitative indicators and the representation of land use to qualitative indicators of healthy living. These changes represent new challenges, i.e., the transformation of traditional patterns of spatial strategies and practices towards a multidimensional and interdisciplinary field of consideration and research. In that respect, the research aims to understand whether and how an architectural design can support a natural setting in the urban area, to place it on the cultural map of the city, and to advance healthy living and well-being, support the intertwining of the wilderness and the built environment, and above all promote WUW as a valuable agent of place identity in the process of urban regeneration. It is about finding a sustainable architectural approach in which the concept of responsibility and awareness is promoted as a creative process—a balance between protecting natural resources, enhancing biocultural diversity, and building a viable urban way of living.

2. Wild Urban Woodland as a Platform for Establishing an Alliance between Nature and Culture

Worldwide, the concept of sustainable development is accepted in its full potential, and it is now widely received that to fulfil a sustainability agenda ^[2], forestry, among other areas, should be used to deliver the three pillars of economic, environmental, and social sustainable development. In the context of the contemporary city, the convergence of these two themes—sustainability and forestry—means that forests are to be used to provide the maximum benefits to the urban society as a whole. Thus, the sustainability of the city also depends on the way in which architecture understands and resonates responsibility towards these specific urban treasures. It implies that it is necessary to build a rhizomatic structure, a network that connects the social, ecological, and economic aspects of the place, in order to enhance the wilderness experience ^[3] and therefore enhance biocultural diversity, i.e., the beneficial development of cities today.

It is widely accepted that during life people learn to interact with the natural environment in many different ways. They develop a relationship between themselves and nature and establish a particular coexistence with it, with the aim of making self-recognition possible. Various studies emphasize that the interrelationship between people and their natural environment ^{[4][5][6]} enhances the diversity of life within complex socio-ecological systems such as cities ^[7]. As the majority of people nowadays live in cities, this bond, an interaction with the natural environment, declines and fades away. Additionally, dynamic and complex urban transformations accelerate the degradation of ecosystems ^[8] on one side and cause the alienation of urban residents on the other ^[9]. The question of how to create an alliance between ecology and culture to resonate the newly established health and leisure issues of urban transformations is raised.

In urban areas, forestry, the managing of forest lands, indicates public activity in wilderness settings. Urban wilderness used to be seen as a paradox in itself as the natural and the urban have always been seen as opposed to one another. Today, WUW is under the pressure of political and economic short-term goals giving priority to profit-based solutions. When in the middle of the city, it is even exposed as an ideal platform for boosting the economic potential of the city and attracting foreign capital and is viewed simply as an empty but expensive lot. It seems that today the story is changing as cities are prone to giving priority to health and community matters and keeping city dwellers in touch with nature and natural processes. The social, ecological, and aesthetic values of forests and other woodlands in the city are nowadays given more consideration than ever before ^[10]. They are important settings for a number of public and health-related reasons, offering “psychological restorative experience, physical activity and social interaction” ^{[11][12]}; thus, they become a therapeutic landscape. As the density and compactization of cities grow, urban woodland, particularly wild urban woodland in the very heart of the city, a rare phenomenon and a contested site where different political and economic interests challenge its welfare, is usually seen as a response and a solution to the various challenges cities are faced with.

On one side it is a perfect pollinator habitat, a highway for insects, birds, and other species, and on the other a perfect setting for the restored human experience of nature forgotten in the contemporary urban lifestyle. Therefore, WUW has great potential to contribute to urban biodiversity conservation ^{[13][14]} and regeneration, but it also allows people, and in particular children, to experience nature ^{[15][16]} “offering a range of opportunities for informal recreation activities” ^[17]. A few existing studies on the subject of urban nature where traces of neglect become a valuable space resource ^{[18][19]} illustrate the benefits of structural diversity ^{[13][20][21]}, a sort of hedonistic recuperation strategy leading to a new kind of socio-ecological sustainability. Therefore, a better understanding of ecological components of urban nature, i.e., urban woodland in relation to varying types and levels of cultural interventions, would open a new perspective for the occupation and better functioning of informal urban greenspaces.

In past decades, the concept of biocultural diversity and the holistic view of a human–nature system made valuable contributions to science and practice, which significantly advanced people's understanding and the possibility of the improvement of the human culture–nature interrelationship ^{[22][23][24]}. As Winter et al. state, “biocultural practices should be a focal point of biocultural restoration efforts in the 21st century” ^[25]. In that context, “in order to foster sustainability it is necessary to engage environmental values, ecological knowledge, and lifestyle practices in addition to the physical drivers that cause biological diversity and ecosystem loss” ^[26]. In order to improve biocultural diversity, it is certainly necessary to develop and respect biocultural identity, as well as to understand and recognize the potential of the local ecological knowledge and value systems that accept, respect, and engage nature.

3. Challenges, Problems, and Gaps in Establishing Biocultural Alliance

Various studies show that urban woodlands, together with formal green areas, urban wastelands, and other informal wildernesses of the city, i.e., urban nature, are recognized as major catalyzers of biocultural diversity ^[22], and the first line of defense when the question of socio-ecological well-being and the resilience of the city is raised ^{[4][5][27]}. Therefore, the

main response to this contemporary urban challenge is biocultural diversity. It builds on the longstanding interest in understanding the relationship between nature and culture, cultural ecology, and cultural landscape. Driven by the legacy of socio-ecological well-being, it was developed in early 1990s and further enhanced at the turn of the century with the recognition of the cultural landscape as a World Heritage Site. The term biocultural diversity, as stated by Maffi “comprises the diversity of life in all of its manifestations: biological, cultural, and linguistic, which are interrelated (and possibly coevolved) within a complex socio-ecological adaptive system” [28]. It started to be recognized in the global policy arena after Maffi and Woodley [29] brought forth a valuable survey on the biocultural diversity project and when CBD and UNESCO produced the “Joint Programme on the Links between Biological and Cultural Diversity” (JP-BiCuD). With the aim of implementing the program on the European level, the term has been promoted to emphasize the relationship between biodiversity and cultural practices in the context of urban green spaces [30]. The term gradually entered the discipline of urbanism and architecture with the aim of investigating the spatial possibilities for the phenomenon (Green Surge) to widen its impact and scope. Eventually, the focus changed from diversity to biocultural practices aiming at multiple, sustainable links between nature and culture [31] in order to develop a kind of alliance capable of mutual support and development.

A spatial approach pulling conceptual roots from the biocultural diversity framework thus has to fit in and balance two dimensions: the identification of the key elements of naturalness to trigger social and cultural understanding and the rebuilding of the indigenous values of urban wilderness to trigger the diversity of the place. Therefore, a physical and mental accessibility and attractiveness, i.e., the identity of the place, has to be supported with a set of values, beliefs, attitudes, and behaviors for both culture and nature. The creative potential of this nature–culture alliance from a spatial point of view sees architecture as a responsible agent with knowledge and skills that comprehensively target the creation of the purposeful, responsible, and collaborative sustainable setting. WUW is recognized as a platform for reconciling the alliance between cultural and biological diversity, in line with a postindustrial, creative urban society inclined towards divergent living dynamics and styles as important components in enhancing human well-being via ecosystem services [32]. Although the framework of biocultural diversity [33] has been repeatedly emphasized at the multidisciplinary level [32], and the connection between people and the natural environment has been placed in the priority framework of urban development, there is still a lack of research that goes deeper into the method and approach of establishing the connection between culture and nature within architecture and urban design, i.e., establishing productive connections of cultural and natural ecosystems in finer scales closer to man.

Therefore, the problem lies in the scale. While the ecological system is perceived on a regional scale, the cultural system resonates with human habitats on a local community scale. Therefore, urban woodland is, at the same time, a part of the ecosystem and a complex setting for a cultural system. Hence, it is perceived from a different perspective and usually has a different role. While landscape urbanism recognizes the intertwining of ecological matters on various scales it usually only allows man to be a visitor, a sort of viewer and spectator, but not a productive component, of the econiche. The element that could unite those two diametrically different scales is architecture. Architecture provides the overlapping between what is ecologically possible and what is societally desired by the current generation. Architecture has the ability to integrate social, environmental, ecological, economic, political, and aesthetic factors, overlapping through mutual attachment and the participation of people in all these processes. The researchers are looking through the lens of urban ecology, through an ecological paradigm [34]; therefore, the researchers might recognize the ways in which citizens benefit from, and forests add value to, the city and community (water, air, sunlight, shade, shelter, and local climate), making a place with a social and an ecological meaning. It is an ecosystem of natural, seminatural, postindustrial, and manmade origins, used for a variety of purposes, including recreation, relaxation, nurture, education, protection, and sometimes production. The researchers are talking about architecture that can provide flexible interconnectivity and adaptable structure and can accommodate both social and ecological activities at the same place in a complementary system. It can help in facing up to the identity of WUW, as mixed feelings always occur. On one side, it is perceived as ugly and offensive, unsecure and unclean, and ready to be wiped away and reshaped entirely. On the other, there is a group of people for whom the wilderness effect of the woodlands provokes overwhelming feelings and evokes a rich environment. Relying on the results of the Green Surge, the question of how people react and act in such places was the main topic discussed and performed with the students through their design project on resonating the alliance between nature and culture in the case study of War Island in Belgrade.

The biocultural alliance is addressed in various disciplines on the level of the ecosystem and mainly on the urban scale, while at the community level, on the architectural scale, it is not yet apparent [5]. It is not a question of whether nature benefits from culture, but how and in what way it does so, on all spatial scales. As Lawson says, “The task of any designer is to develop solutions that are aesthetically pleasing, practically useful and well-functioning”, and he further explains that modern education is not ready and is unable to grapple with today’s multidimensional problems. Traditional education is based on one discipline, in which cultural and ecological, technological, and biological backgrounds are different,

inevitably creating a different approach to thinking about solutions and taking action. Thus, if architecture is to produce a good design, an integrative approach is necessary, a different kind of thinking that includes awareness and responsibility towards the other sciences involved in the development of the city and society [35].

Therefore, further research will be based on the idea of environmentally responsible design. The new concept supports and helps the environment to develop its potential. It is aimed at establishing a harmonious and interdependent relationship between nature and culture, which thereby mutually support and protect each other. The architecture in question is not an object, but a network of elements, a system that integrates with nature, i.e., a unique eco-system. Confirmation of this view can be seen in the presentation of Soria-Lopez; when speaking about the establishment of a solid connection between man and nature, she talks about the importance of the interpretation and evaluation of the experiences and perceptions that residents achieve through the daily use of architectural space (bodily appropriation of space) [36]. Therefore, the landscape is not a scenography for architecture, it is a tool for thinking about the processes that affect it and, vice versa, how it affects them [37][38][39].

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