

URBAN LANDSCAPE ARCHITECTURE TOWARDS A SUSTAINABLE CITY PERSPECTIVE

ANANIADOU-TZIMOPOULOU M.¹ and GAVRIILIDOU E.²

^{1,2}School of Architecture, Faculty of Engineering, Postgraduate Program in Landscape Architecture, Aristotle University of Thessaloniki, 54006, Thessaloniki Greece
E-mail: elegvr@hotmail.com

ABSTRACT

The paper is dealing with landscape planning/design and the contribution in urban environment's upgrading through a recent approach. Urban space via- and sustain-ability are examined in the context of contemporary landscape architecture. The socio-ecological and perceptual approach in urban landscape projects is proposed for the anasyntaxis and the rehabilitation of the modern city's environment, according to the urban space potential and the image, natural and cultural, of the city. The proposal is documented by the results of a research upon the concepts of urbanity and sustainability and upon applied urban landscape projects leading to a sustainable city perspective. The idea of urban sustainability, defined and perceived through the theory and practice of landscape architecture, is emerging and is guiding modern trends in landscape design. The term becomes more and more topical, in the search of the urban conditions that can ensure a high standard of living without compromising the living quality of the future generations. The issue of livable cities remains at the core of discussion, defining directions and practices, being notably topical, useful and urgent in times of social, economic and environmental crisis. The dynamic city-scape operates in parallel as an ecosystem, as a space of social coexistence, as a cultural generator. The capability of a city to envision the future, or even its next "phase", and to design it though the landscape, it is probably the key to its duration in time.

Keywords: sustainability, urban landscape architecture, landscape planning / design

1. Introduction

Since the last decades, the research of various scientific fields around the city, is focused on the redetermination of the notions of urban via- and sustain- ability. These concepts interpreted in terms of ecology, urban planning, design and architecture, social and economic sciences and human geography, reveal the continuous need not only for an efficient use of natural resources but also for quality standards of life conditions in the cities, for the present, for the future and for all. The topic becomes more urgent in times of crises, economic shifts, energy or environmental challenges, and always with a view towards the future, with the intention of detecting deficiencies and dynamics in the present so as to ensure the long-term progress.

Within an overall socio-ecological and perceptual approach, the paper broadens the discussion upon sustainability and environmental planning/design establishing the contribution of landscape architecture to the durable future of cities as comprehensive and substantial. After a brief review of sustainability concept, the paper is based on landscape architecture researches either theoretical or planning and design projects form Greece and Europe, to extend and enrich the dialectic relationship between urban sustainability and city-scape.

2. Sustainability. historical and theoritical approach

From the early years of Industrial Revolution the urban living qualities stimulated the reforming movement in order to reinstate the ecological balance between built-scape and open spaces (Girardet, 2004:65). The first urban parks of the 19th century, accessible to all, the new "lungs" and cores of social interaction for a "healthy" and "democratic" society, the examples of F.L.

Olmsted in New York and Boston, are typical, as well as the utopias of *Hygeia, a City of Health* of B. W. Richardson in 1876 and the *Cité Industrielle* of E. Hénard in 1900 in the regeneration direction. Later, the Modernism insisted on living standards for all as it is declared in the 4th CIAM Congress of 1933 and in Athens Charter, where the urban densities, the green spaces and the building of new cities alongside with the topographic and ecological capacity of the site, are in special focus. Moreover, in this period the turn to the study of the vernacular agglomerations' integration is noticeable, so as F.L. Wright to support the view that vernacular architecture is thoroughly adapted in the environment, and Le Corbusier to describe in 1934 the vernacular settlements as the completion elements of the landscape.

To sustain derives from sub- [under] and tenere [hold], and means "to hold up, to bear, to support, to keep going, to support the life of and to prolong" (Benson & Roe, 2000:5). The term "sustain-ability" is due to the emergence of ecology, and particularly of forestry in 1713 (Speidel, 1984 as cited in Turner, 1996:91). The first global mention is marked after the United Nations Conference on the Human Environment in Stockholm in 1972. Since 1976 and the Habitat I, the concept is associated with the living quality and later, in Bruntland Commission of 1987 "sustainable development" is referred as the "development that meets the needs of the present without compromising the ability of the future generations to meet their own needs", with the issues of the aging infrastructure and environmental degradation to be underlined. Since the early years of 1990, an international mobilization arises; relating sustainability with environmental economy, exploitation of natural resources, air quality, pollution, healthy housing, open spaces' distribution, mix of land uses and low energy means of transport (Clergeau, 2007:121-125). Therefore, in 2000, in the preamble of the European Landscape Convention, the landscape is affiliated with the sustainability concept for the first time and it is considered as the formulator of local cultures and identities, the component of natural and cultural heritage, the generator of human-wellbeing (Maria, 2009:131). Lately, the ecological approach even in landscape design and planning prevailed; in small scale through efficient methods of storm water management and urban green maintenance, and in large scale in landscape planning under the influence of landscape ecology.

3. Urban sustainability through a contemporary landscape architectural approach

From the Ian McHarg's ecological approach in landscape planning as we know it from the *Design with Nature*, the significance of landscape architecture projects was extended through the interpretation of the French School and the École Supérieure du Paysage, Versailles in 1970s. Landscape architecture moved from the art to science and from science again to art, from a means of representation to a means of reconstitution of the urban space, meeting the changing urban needs (Ananiadou-Tzimopoulou & Charistos, 2013:357) and landscape projects were seen as works of art and culture also, as society's projects (Ananiadou-Tzimopoulou, 2005:562) and as "vivid documents" of the social, ecological, and the cultural image of a real society.

The comprehensive approach by Maria Ananiadou-Tzimopoulou recognizes the landscape as a dynamic, changing, mutable system of social, ecological and perceptual parameters and acknowledges it "not only as nature, but as a social effect in evolutionary process", as the inscription of culture in space and time. This socio-ecological and perceptual site's reading, consists "an evaluation or investigation of the potential or suitability of the landscape for social use and a search of the way that the new landscape will respond to the expectations of the people who inhabit it or use it" (Ananiadou-Tzimopoulou, 1982:27). Through a short and long term study, it decodes the space, the traces of its formation and evolution, it discovers the existing potentials, capacities and qualities (Corajoud M. & Corajoud C., 2001:20), it reveals its spirit in order to recreate it adding new virtues, projecting a new enriched image of the city, figuring the city's sustainability in multiple levels, for present and future generations. This is why landscape architects are the "music-makers" of the future (Hopkins, 2005:52); they do more than change the "status quo", they "shore up the existing privilege" (Price, 2000:50). Landscape architecture projects are restoring the ecological balance in the city but as they concern art works also, they guide the "poesis" of a new urban space, pleasurable and cultured (projets

culturels) for a contemporary society (Ananiadou-Tzimopoulou & Yerolympos, 2007:7,8). This reasoning formulates a wider perception of urban sustainability, emphasizing to the quality of experiencing the urban space.

Integrated in the spectrum of regional and local agendas, the landscape architectural approach contributes in the livability, the need for aesthetic surroundings, in the biodiversity and finally in the prosperity of the present and future generations (Selman, 2000:109). The landscape architecture's contribution can be described otherwise as the creation of a natural and cultural infrastructure in the present for the future (Gavriilidou, 2013:35), that "drives the process of city's formation" and "seeds the future possibility of the city" (Corner, 2006:24,29), finally designating the framework to rethink the city (Corajoud M. & Corajoud C., 2001:20).

4. Applications – selected urban landscape projects

In order to illustrate the relation between landscape architecture and the sustainability concept, five landscape architecture projects in the context of the overall socio-ecological and perceptual approach, from the large city scale to the small scale of a square, are selected as representative; the Thessaloniki Strategic Green Plan, the Serres urban landscape project, the Boston reclamation landscape project and the Ayia-Varvara Drama landscape project. In the case of Thessaloniki, the Strategic Green Plan proposes the protection of the existing open spaces and the integration of new ones- residual sites, former industrial areas and military campuses, streams and infrastructure networks-, to create a new image coming out from the spirit, natural and cultural of the city, to give finally back the lost city-scape's identity (Ananiadou-Tzimopoulou, 2006:77-85, 479-487). Respectively, in Serres project, the available open spaces are treated not as fragments for renewal, but as urban space units with clear landscape characteristics, as the material to reinstate the syntax of landscape. The streams are deciphered and together with the central public spaces, the squares, the islets and the pedestrian streets, are uttered in a new system defining the ecological, historical and cultural structure of the landscape in a flowing continuity, legible and capable to host contemporary, cultured spaces for pleasure (Ananiadou-Tzimopoulou and Tzimopoulou, 2006:511-521) (figure 1).



Figure 1: Landscape analysis and proposal for Serres city.

This approach is adopted also by Michel Desvigne in the MLA Harvard case study, to transform abandoned sites of the suburban area of Boston, at the boundary with infrastructure networks and industrial districts, into livable landscapes capable to recompose a new urban geography in the city's "durable" perspective (Desvigne, 2001:56) (figure 2).

In small scale, the regeneration of Ayia Varvara area in Drama, is also an example in this direction. A remnant site among the old tobacco warehouses of the historical city core (0,8 ha), with special ecological value nonetheless, is designed as a cultural landscape which operates beneficially until today for the urban microlimate and ecology, and mainly for the quality of the living experience, the vivid image of the city (Ananiadou-Tzimopouou et. al 2007:201) (figure 3).

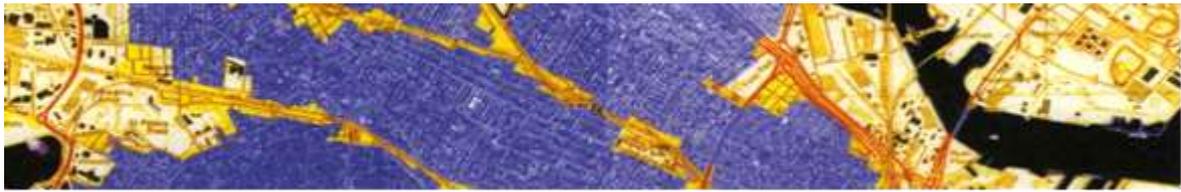


Figure 2: Reclaiming the landscape of Boston.



Figure 3: Agia-Varvara, Drama. A new natural and cultural identity for the city.

All these examples referring at the same time to social, ecological and perceptual parameters, read in each case the inner capacity of the landscape to be designed, promoted and enhanced as a contemporary and cultural one. The topography, the hydrology, the vegetation, the existing ecosystems, the human trace in the space, the spatial characteristics, the special architectural qualities are used to reconstitute a new landscape physiognomy, respecting the existing resources, revealing the inner potentials and describing a new vision, a new scenario of progress, to form a sustainability perspective,. Landscape architecture projects, as artistic, scientific and society's projects, reveal the notion of well-being upper of the idea of sustain or just live, adding value to the city, enriching the urban space culturally and ecologically and formulating finally at the present the framework for a society to develop in the future. This is the landscape architecture overall conception of sustainability.

5. Conclusions

Among the fields related with the issue of urban sustainability, urban landscape architecture's contribution is broad and overall. In fact, the word sustainability doesn't mean anything more than the capacity of duration in time, notion closely related with the nature of landscape; a flexible, adaptable, continuously mutable infrastructure. The urban landscape is regarded socio-ecologically and perceptually "legible" through the spherical approach and landscape architecture designates the complex organism of the city transforming, activating and managing the ecological balance, focusing on the human experience of the space, on the space quality for a contemporary society. The art and science of the space, the space's "poesis", through the scope of landscape architecture, works to create a cultural and natural background in the present, that drives on the future in a long-term perspective, exactly as the sustainability concept claims.

ACKNOWLEDGEMENTS

The study was conducted thanks to "IKY Fellowships of excellence for postgraduate studies in Greece - Siemens program".

REFERENCES

1. Ananiadou-Tzimopoulou M. (1982), Landscape Analysis in Design and Planning. Contribution in Landscape architecture research (PhD dissertation), Scientific Yearbook of Polytechnical School, Aristotle University of Thessaloniki, (in Greek).
2. Ananiadou-Tzimopoulou M. (2005), "Landscape projects as society's projects", IASME/WSEAS International Conference on Energy, Environment, Ecosystems and Sustainable Development, Vouliagmeni, Athens, Greece, pg. 562-568.
3. Ananiadou-Tzimopoulou M. (2006), "The periurban forest of Thessaloniki – Landscape Design" & "Strategic plan for green in Thessaloniki", Proceedings of 2nd Conference of A.U.Th. Environmental Council: The environmental problems of Thessaloniki region. The views of A.U.Th., Thessaloniki (in Greek), p. 479-487, 77-85.
4. Ananiadou-Tzimopoulou M., Charistos V. (2013), "Landscape architecture- landscape urbanism, regenerative correlations in urban field", Proceedings of International Conference Changing Cities-Spatial, morphological, formal & socio-economic dimensions, Volos, Greece, p. 351-358.
5. Ananiadou-Tzimopoulou M., Tzimopoulou S. (2006), «Serres. Urban Renewal through Landscape Architecture or the Art of Landscape» in Volume in honor to Professor N. Nikonano, G. Karadedos (ed.), D' Department of School of Architecture A.U.Th. – 10th Ephorate of Byzantine Antiquities Chalkidiki and Mount Athos, Thessaloniki, (in Greek).
6. Ananiadou-Tzimopoulou M. & Yerolympos A. (2007), «The square, a vivid urban landscape», in Squares of Europe, Squares for Europe, Manusco Fr., Kowalski Kr. (ed.), Jagiellonian University Press, Cracow.
7. Benson J. & Roe M. H. (eds) (2000), Landscape and Sustainability, Spon, London.
8. Clergeau P. (2007), Une Écologie du Paysage urbain, Éditions Apogée, Paris.
9. Corajoud M. & Corajoud C. (2001), «Créer un rapport intelligible au territoire. Huit situations paysagerès dont tirer quelques enseignements» in Penser la ville par la paysage, Masbougni A. (ed.), Projet Urbain Editions de la Villette, Paris.
10. Corner J. (2006), «Tera Fluxus», in The Landscape Urbanism Reader, C. Waldheim (ed.), Princeton Architectural Press, New York.
11. Desvigne M. (2001), «La fabrication pragmatique du territoire», in Penser la ville par la paysage, A. Masbougni (ed.), Projet Urbain Editions de la Villette, Paris
12. Gavriilidou E. (2014), "Urban Landscape Design and Sustainability in the Contemporary City", Thesis for the course Landscape Architecture: Theory and Critique. Supervisor: M. Ananiadou-Tzimopoulou, Postgraduate Program in Landscape Architecture, Aristotle University of Thessaloniki, Greece
13. Girardet H. (2004), Cities People Planet – Liveable Cities for a Sustainable World, Wiley-Academie, Chinchester.
14. Hopkins J. (2005), "Music-makers and the dreamers of dreams", in The cultured Landscape: Designing the environment in the 21st century, Sheila Harvey, Ken Fieldhouse (ed.), Routledge, Oxon.
15. Maria E.A. (2009), The legal protection of landscape in International, European Community and National law, Publ. Ant. Sakkoulas, Athens (in Greek)
16. Selman P. (2000), "National and Regional Scales", in Landscape and Sustainability, Benson J. & Roe M. H. (eds), Spon, London.
17. Turner T. (1966), City as landscape: A post-modern view of design and planning, E & FN Spoon - Chapman & Hall, London.