



SZENT ISTVÁN UNIVERSITY

**CONTEMPORARY WINE ARCHITECTURE IN  
VITICULTURAL LANDSCAPES**

DOCTORAL DISSERTATION  
ABRIDGED DISSERTATION

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## RESEARCH HISTORY AND OBJECTIVES

In the opening years of the 21st century, the seemingly old-fashioned term 'landscape' has curiously come back into vogue, occupying a prominent place in each specialised area of physical design, such as architecture, landscape architecture, and urban design and planning.

Generally, in the field of architecture, the landscape is largely regarded as the natural backdrop for the built forms. This trend was set down during the so-called Modernism period – an era of abundant and cheap fossil fuels. In this period, many buildings were built far from the concept of “an alliance with nature”, the main attention was paid to the semantic aspects of architecture. Much contemporary architecture still follows this trend. However, recently an opposite trend has been adopted. Due to an increased awareness of the planet's limited natural resources, the growth of tourism and the associated needs of regions to retain a sense of unique identity (Corner, 2006, p. 023), new technologies and landscape architects exerting ever-greater influence on contemporary design (Betsky, 2002), a “new direction in contemporary architecture” has emerged in which the **landscape analogy** has acquired renewed attention. The landscape theory has given architecture new frameworks to select and edit attributes of its site or region, and to create “**a more meaningful dialogue with the broader cultural construct of the landscape**” as an evolving idealised space.

Expanded to the scale of the territory, architecture finds new programmatic potentials, a new relationship to site, and new technical challenges. The designers have introduced new and exciting compositions as well as environmentally sensitive construction techniques and tools for establishing a more appropriate relationship between landscape and architecture and for preserving the natural land and landscape character on which new built forms are built.

Integrating architecture and landscape is an important trend nowadays. However, it is important to mention, although more visible in the discourse now, the communication between landscape and architecture is not a recent development, in fact, has been a part of the architectural practice for a long time. The landscape has provided a conceptual space for architecture for over a century. In this conceptual space, the discipline of architecture has engaged with theories of place, regional identity, nature and lately the ecological.

The communication between architecture and landscape as a phenomenon of contemporary architecture have been approached and illustrated in the books as *Landscapers: Building with the Land* (edited by the architect Aaron Betsky, 2002), *Topographical Stories: Studies in Landscape and Architecture* (edited by the architect David Leatherbarrow, 2004), *Landform Building: Architecture's New Terrain* (edited by the architects Stan Allen and Marc McQuade, 2011). The titles of these books are sufficient to make their approach visible.

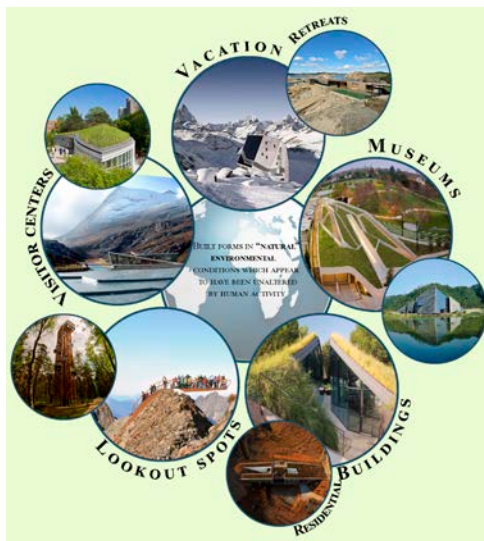


Fig. 1. Interventions in “natural” environmental conditions

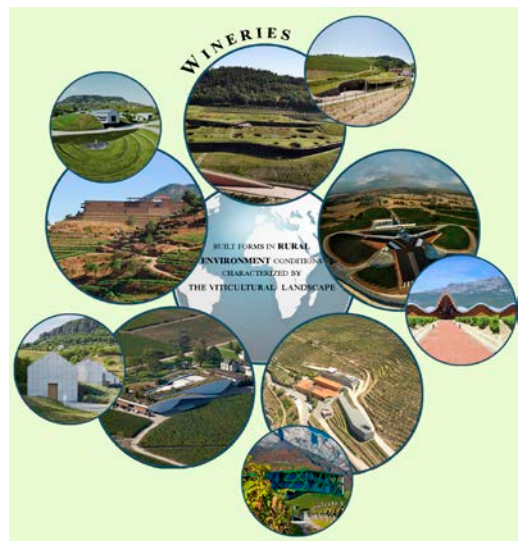


Fig.2. Interventions in rural environment conditions characterized by the viticultural landscape

Generally, it is common that those interventions that seek to engage with existing landforms and or geology, topography, etc. do so in “natural” environmental conditions which appear to have been unaltered by human

activity, and yet those are implemented as well as in the rural environment conditions characterized by the viticultural landscape (Fig. 1, 2). The landscape has been used as a metaphor or conceptual reference for an increasing number of wineries and extensions. This phenomenon seems to be a substantial innovation of wine architecture with interesting potential for artistic, social and ecological gains. In accordance with the above mentioned, this thesis proposes to reveal the unique European viticultural landscapes character in its communication to contemporary wine architecture. The reason that I chose this topic was twofold: firstly, the viticultural landscape is one of the most beautiful human-made landscape settings in the world. The viticultural landscapes provide an outstanding backdrop, bearing witness to the importance of the winemaking, which has advanced according to a balanced coexistence between development and tradition. These landscapes are unique, structurally rich rural landscapes. These are moulded by the presence of vineyards, sculpted by the natural elements such as soil, landforms, bodies of water, natural vegetation and vegetation corridors, shaped and embellished by human elements such as forms of land use, structures (e.g. drainage and road systems; terraces; platforms; stone walls; stone hedges; concrete, metal or wood poles, aimed at supporting the wires to which vines are connected; fences, orchards, gardens, etc.) and architecture. The built environment, specifically the architecture of the supporting structures (such as stone walls), cellars, grape-pressing houses, wineries, monasteries, castles, ruins, etc., and the urban architecture of the towns and villages are striking elements of the viticultural landscapes and therefore accounts for their high cultural value. These human-made landscape settings create the image of the regions and contribute to their uniqueness and identity; represent cultural heritage, function as trademarks for their areas, attract visitors, inspire art, serve as places for spiritual activities, etc. These represent one of the largest agro-ecosystem and are the most important agricultural activity in terms of environmental impact and income. Wine production landscapes represent

“everyday landscapes” (European Landscape Convention, art. 2) to which the collective imagery worldwide acknowledges such a high “identity” value (European Landscape Convention, art. 5) that they have become emblematic of the culture of several European countries.

Secondly, the design of a winery into a viticultural landscape came to be an important challenge and a popular commission among prominent architects in the 21st century. The “contemporary wineries/winemaking facilities” are commercial aggregates and represent one of the typologically most complex architectural objects, set in a cultivated environment. Previously of peripheral importance, architecture has become increasingly significant, even central, to winemaking. The heightened interest in what has come to be called “Wine Architecture” now extends far beyond the limits of the profession. It plays an important role in promoting and sustaining the public’s fascination with all things connected with wine. The wine has always contained a subtle interior, invisible and complex architecture. But, nowadays, wine architecture forms communication (alliance) with its context/territory in a more meaningful way. The viticultural landscapes are treated more than the backdrops for the built forms, they are treated as sites which not only delineates the conditions under which architectural forms must operate but as well provides inspiration for them. Natural elements, such as sun, land, stone, soil - the forces that contribute to the ripening of the wine - are presented in wine architecture to evoke a communication to nature.

*What Is already known?*

Wine architecture became fashionable, often designed by professionally highly commended architects, consequently it has a rich literature.

*What Is not known?*

New wineries haven’t been analysed from the point of their relationship to landscape: an approach which takes into consideration not only the architectural intentions but also the landscape impact on the building.

Accordingly, with the above-mentioned the research objectives are the following:

- The main objective is to introduce a new approach to the analysis, namely to analyze the wineries through the prism of the landscape approach, based on landscape assessment methods.
- The second important purpose of this study is to contrast and compare the generalized results of the analysis with particularly offered solutions of investigated wineries.
- More than that, through a comparative assertiveness, synthesis of academic literature, case studies, planning documents, and other structural, methodological, and interpretive guidelines were provided modified criteria for examining the ever-changing meanings and context of harmonious communication between wine architecture and its landscape.
- The last but not the least objective of present work is to provide a richer understanding of the current state of wine architecture and offer a summary of “best practice” solutions, methods, elements which result in a harmonious co-existence of landscape and winery.

This paper aims to answer the following questions:

- a) What kind of techniques do the designers use to fit the building into the landscape?*
- b) How does the landscape character influence the building?*

## **MATERIALS AND METHODS**

To reach the aim and objectives of the thesis, I relied on the case study method. I applied the following specific criteria for the selection of examined wineries:

- 1. Location: they should be located in the open viticultural landscapes (i.e., should be built outside or at least outskirts of the villages/towns) of the European wine-producing countries;*

2. *Date of completion: they should be built after the millennia, namely from the 2000s;*
3. *Architectural appearance and their architectural appreciation: they should have an international architectural appreciation (i.e., should be published in books, periodicals and on architectural websites);*

Relying on these criteria and also on my personal appreciation, I have selected 30, recently built, examples of remarkable and inspiring wine architecture out of which 21 are new wineries and 9 are wineries' extensions.

I analyzed the selected case studies considering the following order and factors/aspects:

**I.** I created a qualitative description of the 30 examples, which include:

- ✓ General details of the case studies
- ✓ Analysis and assessment of the case studies according to: (1) *natural features* (landforms, hydrology, climate, soil), (2) *land use and structure* (pattern plots' structure, and patterns of build forms and natural elements), (3) *culture, emotions, traditions*, and (4) *visual, aesthetic aspects of the buildings* (the volume, shape and forms, the shape of the roof and windows, scale, materials and colors) and its natural and cultural context.
- ✓ The architects' intentions and the reviewers' appreciations.

The information for case studies was gathered from written materials (designers texts, architectural critics' review), photos, site layout plans from Google Maps, wineries' websites, architectural websites such as Architizer.com, ArchDaily.com, Dezeen.com, Divisare.com, etc., site visits in case of Hungarian, Spanish (1 from 6, Faustino Winery), Portuguese (2 from 4, Quinta do Napoles and Quinta da Faísca) wineries and from Wine-Searcher database, which includes an encyclopedia of wine regions, grape varieties and wine producers (<https://www.wine-searcher.com/>).

For a quantitative result, a comparative analysis was created. Taking into consideration the analyses of the exterior aspects of the new buildings and their



surroundings, I divided the 30 examples according to the four factors which define the landscape character: Natural features: morphology and the building” “Landscape patterns and the building “Culture, emotions, tradition” “Perceptual, visual aspects”.

## **RESULTS**

By exploring the research questions formulated in the dissertation, the research results are presented as an enlarged description of the following theses:

**THESIS\_1: The contemporary wine architecture bears the answer to the philosophical question that takes into account the surrounding landscape, namely how should be designed and built places that do not intrude upon the landscape identity, but rather preserve and add value to it - places where architecture and landscape enhance and elevate each other.**

This research defines the characteristics of the site-embedded contemporary wine architecture and highlights the landscape factors that inspired the architects and the used technics. To perform the study, I selected wineries and cellars that are owned by prominent entrepreneurs and are designed either by the world’s foremost architects or country’s leading architects. These are highly appreciated and have international popularity. Analyzing the exterior aspects of the new buildings and their surroundings, and taking into consideration the architects’ expressed intentions and reviewers’ evaluations, I found out that the adaptation/integration to the existing viticultural landscape was one of determining criterions in every case. The architects emphasized and incorporated the visual quality and cultural values of the landscape to their architectural concepts in addition to ecological concerns. They created buildings that are intimately connected to place and time - i.e. they created a symbiotic relationship, interaction, connection, dialogue between their architecture and context; a mutually beneficial relationship where one informs the other and vice versa.

THESIS\_2: This research defined, that there is an order to create an integrated design between the wine architecture and the viticultural landscape, all architects used essentially the same techniques such as **(a) reduction in volumes, (b) concealment at least part of the building into the slope (c) camouflage or adjustment to and (or) mimesis of the physiognomic qualities of one (or some) landscape forming elements.**

(a) **Reduction in volumes:** The wine production requires large resources of land, labour, and time. For years, wineries themselves were essentially industrial complexes consisting of grape nurseries and farms, with onsite factories, storage facilities, and living quarters for workers and owners. The analyzed case studies are not only industrial places adequate to produce wine, but also public buildings which comprise visitor facilities. In the past the winery's facilities were accommodated in several buildings, architects of today developed compact structures where one building house all the facilities, in many cases under one roof, thereby reducing the physical impact of the winery on the land. (b) **Concealment at least part of the building into the slope:** it is a common technic which is used in each case studies, the difference is in the proportion of the underground and above-ground parts. Generally, by embedding/concealment at least part of the building into the ground, the architects not only endowed the wineries/cellars with a gravity flow process and natural regulation of temperature and humidity - factors that are central to the production of wine - but also reduced their scale, thereby mitigating the visual impact of the buildings' mass on the surroundings. (c) To mitigate the visual impact of the above-ground parts and to strengthen the relationship between buildings and the existing landscape, some of the architects **camouflaged** the presence of the buildings by covering them with a vegetative shell or earth-colored materials; some of them **adjusted** the buildings to the topography, rhythm and geometries of the landscape patterns, existing buildings and (or) **mimicking** the shape, colour, materials of the landforms, landscape patterns, traditional buildings etc.

THESIS\_3: Based on my 30 analyzed examples I could identify two different patterns of the communication between wine architecture and its landscape: (a) **the built forms (wineries and cellars) are the DOMINANT elements of the viticultural landscape, acquiring an important role - they serve as landmarks, drawing the attention of public's eye;** (b) **the built forms are BLENDED into the viticultural landscape, giving up their role - they are designed as being a part of the artificial terrain/landscape.**

To go beyond that statement, there are two more correlations within these two group:

- **Wineries built on rather flat areas (where no specific landforms, patterns, rocks appear) tend to be DOMINANT (for example see Fig. 5.1-5.2), while wineries with a location on hillsides or special relief situation tend to be more BLENDING in their communication strategies (Fig. 5.3-5.4).**
- **The buildings of the world's foremost architects tend to be DOMINANT, they want to create a faraway-visible focus points (Fig. 5.5-5.6), while the less known, local architect tend to design BLENDING forms (Fig. 5.7-5.8).**

As each viticultural landscape and the creative imagination and stylistic language of the architect are different, consequently the buildings are extremely diverse being fundamentally different in their form, use of material, scale and their impact on the cultural landscape. It is difficult to prove this with the below-listed images, but the individual analysis, which encompasses Chapter 4, explains the “communication” between buildings and landscape in details.



Fig. 5.1-5.2. Claus Preisinger Winery and Adegá Mayor



Fig. 5.3-5.4. F.X. Pichler Winery and Bazaltbor-Laposa Winery



Fig. 5.5-5.6. F.X. Tramin Winery and Ysios Winery



Fig. 5.7-5.8. Cascina Adelaide Farm and Škalce Winery

THESIS\_4: The analyzed examples prove that **the IMPRESSION of the LANDSCAPE plays an increasing role in the design process of contemporary architects**. Under the impression of the landscape, I define the complexity of effects, which can influence the design outcomes:

(a) **the surrounding landforms influenced the buildings' size, shapes and roofs;** (see Appx. 5, 10, 14,15, 18, 22, 28)

(b) **the tint of soil, the material of the rocks influenced the colour of the buildings' shell;** (see Appx. 9, 11, 12, 14, 15, 17, 25, 28)

(c) **the landscapes patterns/agricultural units influenced the color of the buildings' shell, footprint, elements;** (see Appx. 1, 5, 6, 8, 9, 17, 18, 22, 24, 25, 26, 28, 30)

(d) **the grapevine - the main element of the surrounding landscape - inspired the colour, structure, and elements of the facades;** (see Appx. 4, 7, 21, 26, 27, 28, 29)

(e) **the traditional architecture - the essential contributors to local distinctiveness which take part fully in the harmony and the grandeur of the vineyard landscapes - influenced buildings' shape, roof, materials and elements;** (see Appx. 2, 13, 16, 19, 20, 21, 23, 29)

To conclude: The surrounding landscape, specifically the elements that are part of the cultural and spatial identity of the territory and which are essential, served as guidance, inspiration and resources for architects to create their projects. In their design aims, missions and programs they gave more-and-more attention to the impression of the surrounding landscape.

**THESIS\_5: The landscape has a powerful driving impact on architects only when the landscape itself is extreme and dramatic.**

A unique characteristic of the viticultural landscape is the terraced vineyards, a perfect example of landscape architecture created by man in inaccessible surroundings. The terraced landscapes with its rhythmic and geometric forms, slopes/ramps, retaining walls and colour palette influenced and inspired the architects. Wineries built in these landscape character are extremely fitted into the landforms, and they are the ones, which hide with the blending attitude (Fig. 5.9, 5.10, 5.11, 5.12)



Fig. 5.9,5.10. Quinta do Napoles Winery, Quinta do Vallado Winery



Fig. 5.11, 5.12. Lavaux Vinorama, Franz Keller Winery

**THESIS\_6: LANDSCAPE IDENTITY is a product in Contemporary Wine Architecture. The new wineries do not serve only for collecting, production and selling the wine, but also “selling the landscape”.**

The idea of social space, emerged as an integral part in the winery in 1966, in the Winery of Robert Mondavi from Napa Valley. The winery - a mixture of event space and factory - became the area’s biggest attraction - for tours, concerts, and art exhibitions. The success of the winery marked the awareness of the importance of complementary programs in the offer of wine-making experience. Consequently, the wine industry recognized that wineries offer the potential for the representation of values and identities. The wine architecture, thus, turned into the most powerful tool to express place identity and to increase profit margins. Napa Valley wine architecture lead to the development of a new wine architecture, the prototypes of a new era were built there (see subchapter 1.2.3). The analyzed wineries incorporate the same design philosophy that welcomes visitors. Their architecture values both sensory and social experience. These spaces are designed for visitors to test, learn winemaking methods, connect with the surrounding landscape. While their architecture is diverse as the wine is, all the structures include intimate public spaces. The core of these spaces is the tasting rooms which are accompanied with glazed walls or large windows and (or) glazed doors which provide visitors with immersing views of the landscape. By “framing the view” and connecting the surroundings with the buildings, the architects created a visual and physical connection between the building and its surroundings and reinforced the sense of place in their new

developments. The transparency of the walls, windows and doors gives the interior space another dimension, a sense of belonging to what is visible and expressional, to what is beyond the structure of the building, and to what is visible in a more distant perspective. The terraces, balconies and loggias, which are important architectural elements in some of the wineries/cellars, strengthen the visual experiences, thereby intensify the visual effects of spatial unity. Thus, the wineries embrace a new philosophy: these are selling not only the wine but the whole experience of the LANDSCAPE - the vineyards, landforms, the whole palette of the senses, the whole identity of the place.

**THESIS\_7: The new contemporary Wine Architecture has a complex of open spaces which maintain and increase its value due to their aesthetic characteristics and functionality. Based on the analyses, open spaces of wineries can be defined such as the (a) attractive terraces, balconies, loggia, (b) multifunctional roofs and (c) road-circulation system.**

(a) These exterior spaces are not offering only unique opportunities to be in these exceptionally beautiful places but also to allow the visitors to fulfil the surrounding landscape in a new way - the long-distance view and panoramic view. These are the places where visitors can get a taste of the beauty of the man-made landscapes, the silence can be “heard”, the aroma of the wine can be perceived, the strength of the materials and the changes in temperature can be felt, the minimal light and shadows experienced.

(b) The shape, size of the ROOFS (in many cases) correlate with this functional need of terraces, but is also a design element, it either attracts the viewer, or tries to be covered with local material, soil, or turf – the point is that the roof is even more important in the design aims, then the walls. It is the roof which determines and gives of the overall-impression of the building.

(c) There is a shift as well in organizing the open space and road network around the buildings. This trend started in Napa Valley, but it still continues today: the service roads, truck-ways and all serving/production facilities getting hidden

from the visitors' eye in the backsides, while parking lots, decorative gardens and patios appear in the front sides.

**THESIS\_8: In general, it may be believed that a small building can be integrated better into the landscape. So, according to my research, analyzing wineries of different sizes, which vary from 49.000 m<sup>2</sup> (Antinori Winery) - 330 m<sup>2</sup> (Lavaux Vinorama) of built-up area, I can state that the size does not matter. The factors that play a significant role to reach a better communication of a built form and its landscape are the character of the site (ex. Claus Preisinger Winery proves that the character of the site plays a significant role for achieving harmony between site and architecture - i.e. on the landscape with a dynamic or dramatic character it is easier to blend the building than into monotonous landscape), the financial targets and the creative imagination and stylistic language of the architect.**

Many of the analyzed examples can prove this statement, but the most evocative examples are Antinori Winery and Franz Keller Winery. Their architectural concepts indeed bear the answer to the most important question of the 21<sup>st</sup>-century: how the countryside can be built on, now and in the future, and how a new understanding of the symbiosis of nature and culture could be created.

**THESIS\_9: From 30 case studies 10 are located on the territories that are included in the UNESCO World Heritage. Based on their analyses, I could not find a strong correlation between them, on the contrary, these are extremely diverse and fundamentally different in their forms, materials used and scales. And if some of them are subordinated to the landscape, as many others examples which are located in non-World Heritage Sites, the architects of the case studies (Château Faugères, Château Cheval Blanc, Château La Dominique, designed by the world's foremost architects) located in Saint-Émilion - the territory which was the first viticultural**



**landscape to be placed on UNESCO's preservation list in 1999 - neglected the subordination of the buildings to the historical-cultural landscape. Their architectural concepts express their style and the owners' egos. These buildings symbolize class, status and superiority. Thus, I can conclude that the special protection, regulation has no impact on winery architecture.**

## **CONCLUSIONS**

The world of wine, despite its strong identity, is undergoing a profound transformation in the ways of producing and vinifying and a highly competitive environment that concerns the globalization of wine markets. The radical changes in the vineyards and cellars are a reflection of this dynamic. The prominent visual proof of the changes are the new winemaking facilities, which are special not only for their wine production but also for the architectural appearance of their production plants. Architecture is used as a marketing instrument - giving to the wine and its viticultural landscape a built recognizable face. Thanks to these contemporary winemaking facilities, viticultural landscapes and wine production became an attractive landscape and architectural experience for every visitor.

## **AUTHOR'S PUBLICATIONS RELATED TO THE TOPIC**

### **Journal articles**

Harea, O., Simon, M. (2019): The viticultural landscape: An inspiration for the artistic self-expression. In *Scientific Journal SUA: Space/Urbanism/Architecture [PUA: Przestrzeń/Urbanistyka/Architektura]*. Vol. 1, p. 113-131. ISSN: 2544-0853. (online) DOI: 10.4467/00000000PUA.19.009.10012.

Harea, O., Eplényi, A. (2017): Viticultural Landscape Patterns – Embedding contemporary wineries into the landscape site. *Scientific Journal Of Latvia University Of Agriculture, Landscape Architecture And Art*. Vol. 10 (10), p. 7-14. (online) DOI: 10.22616/j.landarchart.2017.10.01.

Simon, M., Harea, O. (2017): Terraced vineyards-architectural responses. *Teraszos Szőlőművelés – Új Borászatok. 4D Journal of Landscape Architecture and Garden Art*. No. 44, p. 24-37. (online) Available at: [https://matarka.hu/cikk\\_list.php?fusz=151447](https://matarka.hu/cikk_list.php?fusz=151447).

Eplényi, A., Harea, O. (2016): Lookout-spots in the telescope. *Scientific Journal of Latvia University Of Agriculture, Landscape Architecture And Art*, Vol. 9 (9, p. 21-32. (online) Available at: [https://llu.lv/Raksti/Landscape\\_Architecture\\_Art/2016/index.html](https://llu.lv/Raksti/Landscape_Architecture_Art/2016/index.html).

### **Conference Proceedings and Online Publications**

Harea, O., Simon, M. (2017): Wineries in communication with holy mountains. The XXIV conference in the series of garden art and historical: Sacrum in composing space, 20th of October, Crakow, Poland. The full paper is published in *Scientific Journal SUA: Space/Urbanism/Architecture* [PUA: *Przestrzeń/Urbanistyka/Architektura*, 2018, Vol.1, Crakow, Poland, p. 147-161. (online), DOI: 10.4467/00000000PUA.18.011.8619.

Harea, O., Simon, M. (2016): Terroir: Wine, Winery, Landscape. *Landscapes and Greenways of Resilience: Proceedings of 5th Fábos Conference on Landscape and Greenway Planning*, Budapest, 01 July, p. 275-281. ISBN:978-963-269-548-8.

Eplényi, A., Harea, O. (2015): The analysis of contemporary lookout-tower compositions with relevance to their landscape-environment fitting. 3. Erdélyi Kertész És Tájépítész Konferencia, "A tudás megosztása nem lehetőség: kötelesség," Sapiientia EMTE, Műszaki és Humántudományok Kar, Tirgu Mures, Romania, p. 35.